

# Base Station Antenna



Make you connect to any where at any time  
Innovative & complete solution  
Complete solution for your Tele-Communication Needs

**GT** goodtel<sup>+</sup> Japan

## Index 700~1000MHz

| 700MHz ~ 1000MHz |                       |      |             |           |                    |               |      |
|------------------|-----------------------|------|-------------|-----------|--------------------|---------------|------|
| Type             | Frequency Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model         | Page |
| V-POL            | 790~960               | 1    | 65          | 15        | 0,4,8              | VLB65-15T*    | 9    |
|                  |                       | 1    | 65          | 16.5      | 0,4,8              | VLB65-16.5T*  | 10   |
|                  |                       | 1    | 65          | 18        | 0,4,8              | VLB65-18T*    | 11   |
|                  |                       | 1    | 65          | 15        | 0~14               | VLB65-15V14   | 12   |
|                  |                       | 1    | 65          | 16        | 0~10               | VLB65-16V10   | 13   |
|                  |                       | 1    | 65          | 17        | 0~10               | VLB65-17V10   | 14   |
|                  |                       | 1    | 90          | 16.5      | 0,4,8              | VLB90-16.5-T* | 15   |
|                  |                       | 1    | 90          | 16        | 0~10               | VLB90-16V10   | 16   |

| 700MHz ~ 1000MHz |                       |      |             |           |                    |                |      |
|------------------|-----------------------|------|-------------|-----------|--------------------|----------------|------|
| Type             | Frequency Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model          | Page |
| X-POL            | 790~960               | 2    | 33          | 20        | 0,4,8              | XLB33-20T*     | 18   |
|                  |                       | 2    | 65          | 11        | 0                  | XLB65-11T0     | 19   |
|                  |                       | 2    | 65          | 15        | 0,4,8              | XLB65-15T*     | 20   |
|                  |                       | 2    | 65          | 16.5      | 0,4,8              | XLB65-16.5T*   | 21   |
|                  |                       | 2    | 65          | 18        | 0,4,8              | XLB65-18T*     | 22   |
|                  |                       | 2    | 65          | 15        | 0~14               | XLB65-15V14    | 23   |
|                  |                       | 2    | 65          | 16        | 0~10               | XLB65-16V10    | 24   |
|                  |                       | 2    | 65          | 17        | 0~10               | XLB65-17V10    | 25   |
|                  |                       | 2    | 90          | 16.5      | 0,4,8              | XLB90-16.5-T*  | 26   |
|                  |                       | 2    | 90          | 16        | 0~10               | XLB90-16V10    | 27   |
|                  | 698~960               | 2    | 65          | 17        | 3~15               | XLT65-17V15    | 28   |
|                  |                       | 2    | 65          | 17        | 3~15               | XLT65-17V15S   | 29   |
| XX-POL           | 698~803/890~960       | 4    | 65          | 16.5      | 3~15               | XXLJG65-17V15S | 30   |

## Index 1700~2700MHz

### 1700MHz ~ 2200MHz

| Type  | Frequency Range (MHz) | Port | H-HPBW(°) | Gain(dBi) | Electric Tilt(°) | Model        | Page |
|-------|-----------------------|------|-----------|-----------|------------------|--------------|------|
| V-POL | 1710~2170             | 1    | 33        | 20        | 0,2,6            | VHA33-20T*   | 32   |
|       |                       | 1    | 45        | 19        | 0,2,6            | VHA45-19T*   | 33   |
|       |                       | 1    | 65        | 15.5      | 0,2,6            | VHA65-15.5T* | 34   |
|       |                       | 1    | 65        | 18        | 0,2,6            | VHA65-18T*   | 35   |

### 1700MHz ~ 2200MHz

| Type   | Frequency Range (MHz) | Port | H-HPBW(°) | Gain(dBi) | Electric Tilt(°) | Model          | Page |
|--------|-----------------------|------|-----------|-----------|------------------|----------------|------|
| X-POL  | 1710~2170             | 2    | 33        | 20.5      | 0,2,6            | XHA33-20.5T*   | 37   |
|        |                       | 2    | 45        | 19        | 0,2,6            | XHA45-19T*     | 38   |
|        |                       | 2    | 65        | 15.5      | 0,2,6            | XHA65-15.5T*   | 39   |
|        |                       | 2    | 65        | 18        | 0,2,6            | XHA65-18T*     | 40   |
|        |                       | 2    | 65        | 20        | 0,2,6            | XHA65-20T*     | 41   |
|        |                       | 2    | 90        | 16.5      | 0,2,6            | XHA90-16.5T*   | 42   |
|        |                       | 2    | 33        | 21        | 0~10             | XHA33-20.5V10  | 43   |
|        |                       | 2    | 33        | 24        | 0~6              | XHA33-24V6     | 44   |
|        |                       | 2    | 45        | 19        | 0~10             | XHA45-19V10    | 45   |
|        |                       | 2    | 65        | 15.5      | 0~14             | XHA65-15.5V14  | 46   |
|        |                       | 2    | 65        | 16.5      | 0~10             | XHA65-16.5V10  | 47   |
|        |                       | 2    | 65        | 17.5      | 0~10             | XHA65-17.5V10  | 48   |
|        |                       | 2    | 65        | 19        | 0~6              | XHA65-19V6     | 49   |
|        |                       | 2    | 65        | 21        | 0~6              | XHA65-21V6     | 50   |
| XX-POL | 1710~2170             | 2    | 65        | 16.5      | 0~8              | XHA65-16.5V8S  | 51   |
|        |                       | 4    | 65        | 18        | 0,2,6            | XXHA65-18T*    | 52   |
|        | 1710~1880             | 4    | 65        | 17.5      | 0~10             | XXHA65-17.5V10 | 53   |
|        |                       | 4    | 65        | 17        | 0~10             | XXHD65-17V10   | 54   |
|        |                       | 4    | 65        | 18.5      | 0~10             | XXHA65-18.5V10 | 55   |

### 2300MHz ~ 2700MHz

| Type   | Frequency Range (MHz) | Port | H-HPBW(°) | Gain(dBi) | Electric Tilt(°) | Model          | Page |
|--------|-----------------------|------|-----------|-----------|------------------|----------------|------|
| X-POL  | 2300~2690             | 2    | 65        | 18        | 0,2,6            | XHI65-18T*     | 57   |
|        |                       | 2    | 65        | 18        | 0,4,8            | XHI65-18T*S    | 58   |
|        |                       | 2    | 65        | 19.5      | 0,4,8            | XHI65-19.5T*S  | 59   |
|        |                       | 2    | 65        | 21        | 0,4,8            | XHI65-21T*S    | 60   |
|        |                       | 2    | 65        | 17.5      | 0~10             | XHI65-17.5V10  | 61   |
|        |                       | 2    | 65        | 18        | 0~10             | XHI65-18V10S   | 62   |
|        |                       | 2    | 65        | 19.5      | 0~6              | XHI65-19.5V6S  | 63   |
|        |                       | 2    | 65        | 21        | 0~6              | XHI65-21V6S    | 64   |
| XX-POL | 2300~2690             | 4    | 65        | 18        | 0,2,6            | XXHI65-18T*    | 65   |
|        |                       | 4    | 65        | 18        | 0,4,8            | XXHI65-18T*    | 66   |
|        |                       | 4    | 65        | 19.5      | 0,4,8            | XXHI65-19.5T*  | 67   |
|        |                       | 4    | 65        | 21        | 0,4,8            | XXHI65-21T*    | 68   |
|        |                       | 4    | 65        | 17.5      | 0~10             | XXHI65-17.5V10 | 69   |
|        |                       | 4    | 65        | 19.5      | 0~6              | XXHI65-19.5V6  | 70   |
|        |                       | 4    | 65        | 21        | 0~6              | XXHI65-21V6    | 71   |
|        | 2300~2400             | 4    | 33        | 20        | 0~10             | XXHE33-20V10   | 72   |
|        |                       | 4    | 65        | 14.5      | 0~10             | XXHE65-14.5V10 | 73   |
|        |                       | 4    | 65        | 17        | 0~10             | XXHE65-17V10   | 74   |
|        |                       | 4    | 65        | 18.5      | 0~10             | XXHE65-18.5V10 | 75   |

## Index Multi Band

| MULTI BAND |                                         |      |           |           |                  |                       |      |
|------------|-----------------------------------------|------|-----------|-----------|------------------|-----------------------|------|
| Type       | Frequency Range (MHz)                   | Port | H-HPBW(°) | Gain(dBi) | Electric Tilt(°) | Model                 | Page |
| XX-POL     | 824~894/1710~2170                       | 4    | 65        | 13        | 0~14             | XXSA65-13V14          | 77   |
|            |                                         | 4    | 65        | 15        | 0~14             | XXSA65-15V14          | 78   |
|            |                                         | 4    | 65        | 15        | 0~14             | XXSA65-15V14D         | 79   |
|            | 824~894/2500~2690                       | 4    | 65        | 15/16     | 0~10             | XXSF65-1516V10        | 80   |
|            | 806~960/1710~2170                       | 4    | 33        | 19        | 0~12             | XXAA33-19V12          | 81   |
|            |                                         | 4    | 65        | 15/18     | 0,4,8            | XXAA65-1518T*         | 82   |
|            |                                         | 4    | 65        | 15/18     | 0~10             | XXAA65-1518V10        | 83   |
|            |                                         | 4    | 65        | 16/18     | 0,4,8            | XXAA65-1618T*         | 84   |
|            |                                         | 4    | 65        | 16/18     | 0~10             | XXAA65-1618V10        | 85   |
|            |                                         | 4    | 65        | 17/18     | 0,4,8            | XXAA65-1718T*         | 86   |
|            |                                         | 4    | 65        | 17/18     | 0~10             | XXAA65-1718V10        | 87   |
|            | 890~960/1920~2170                       | 4    | 65        | 17        | 3~15             | XXGW65-17V15S         | 88   |
|            | 718~803/1710~1880                       | 4    | 65        | 17        | 3~15             | XXJD65-17V15S         | 89   |
| 3X-POL     | 806~960/<br>1710~1880/<br>1920~2170     | 6    | 65        | 16        | 0,4,8            | 3XLAHDW65-16T*        | 90   |
|            |                                         | 6    | 65        | 16        | 0~10             | 3XLAHDW65-16V10       | 91   |
|            |                                         | 6    | 65        | 17        | 0,4,8            | 3XLAHDW65-17T*        | 92   |
|            |                                         | 6    | 65        | 17        | 0~10             | 3XLAHDW65-17V10       | 93   |
|            | 806~960/<br>1710~2170/<br>1710~2170     | 6    | 65        | 16        | 0,4,8            | 3XLAHAA65-16T*        | 94   |
|            |                                         | 6    | 65        | 16        | 0~10             | 3XLAHAA65-16V10       | 95   |
|            |                                         | 6    | 65        | 17        | 0,4,8            | 3XLAHAA65-17T*        | 96   |
|            |                                         | 6    | 65        | 17        | 0~10             | 3XLAHAA65-17V10       | 97   |
|            |                                         | 6    | 65        | 16/17     | 0~10             | 3XA2A65-1617V10       | 98   |
|            |                                         | 6    | 65        | 17/18     | 0~10             | 3XA2A65-1718V10       | 99   |
|            |                                         | 6    | 65        | 15        | 0~10             | 3XLSHAF65-15V10       | 100  |
|            | 824~894/1710~2170/2500~2690             | 6    | 65        | 13        | 0~10             | 3XLSHAF65-13V10       | 101  |
|            | 824~960/1710~2170/2300~2690             | 6    | 65        | 17        | 0~10             | 3XLCHAI65-17V10       | 102  |
|            | 1710~2700                               | 6    | 65        | 18        | 0~10             | 3XHT65-18V10          | 103  |
| 4X-POL     | 790~960/1710~1880/1710~2170             | 8    | 65        | 15/18/17  | 0~10             | 4XBD65HA35-151817V10D | 104  |
|            |                                         | 8    | 65        | 16/18/18  | 0~10             | 4XBD65HA35-1618V10D   | 105  |
| 6X-POL     | 698~806/824~960/<br>1710~1880/2300~2400 | 12   | 65        | 15/<br>17 | 0~16/<br>0~10    | 6XLRCHDE65-1517V10DS  | 106  |

## Index Small Cell

| Small Cell |                       |      |             |           |                    |                   |      |
|------------|-----------------------|------|-------------|-----------|--------------------|-------------------|------|
| Type       | Frequency Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model             | Page |
| V-POL      | 1710~2170             | 1    | 80          | 7         | -                  | VHA80-07C         | 108  |
|            | 1885~2170             | 1    | 33          | 14        | 0                  | VHS33-14T0I       | 109  |
| X-POL      | 790~960               | 2    | 65          | 12        | 2/8                | XLB-12T*          | 110  |
|            | 1710~2170             | 2    | 65          | 15        | 2                  | XHA65-14.5T2      | 111  |
|            |                       | 2    | 65          | 15        | 8                  | XHA65-14.5T8      | 112  |
|            |                       | 2    | 65          | 14        | 2~12               | XHA65-14V10       | 113  |
|            |                       | 2    | 65          | 14        | 2                  | XHA65-14T2P       | 114  |
|            |                       | 2    | 65          | 14        | 8                  | XHA65-14T8P       | 115  |
|            |                       | 2    | 65          | 14        | 2                  | XHA65-14T2C       | 116  |
|            |                       | 2    | 65          | 14        | 8                  | XHA65-14T8C       | 117  |
|            |                       | 2    | 65          | 14        | 2~12               | XHA65-14V10       | 118  |
| XX-POL     | 1710~2170             | 4    | 65          | 15        | 2                  | XXHA65-15T2BC     | 119  |
|            | 1920~2400             | 4    | 25          | 15        | 0                  | XXHWE25-15T0      | 120  |
|            | 1920~2170/2300~2400   | 4    | 25          | 14/15     | 0                  | XXHWE25-1415T0DS  | 121  |
| 3X-POL     | 1920~2170/2300~2400   | 6    | 25          | 14/15     | 0                  | 3XH2WE25-1415T0DS | 122  |
|            | 1710~2170             | 6    | 65          | 12        | 2                  | 3XHA65-12T2T      | 123  |

## Index Multi Beam

| Multi Beam |                       |      |             |           |                    |                 |      |
|------------|-----------------------|------|-------------|-----------|--------------------|-----------------|------|
| Type       | Frequency Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model           | Page |
| XX-POL     | 790~960               | 4    | 35          | 18        | 0~10               | XXLB35-18V10D   | 125  |
|            | 1710~2170             | 4    | 35          | 20        | 2~8                | XXHA35-20V8D    | 126  |
|            | 2300~2400             | 4    | 35          | 19        | 0~10               | XXHE35-19V10D   | 127  |
| 4X-POL     | 790~960/1710~2170     | 8    | 35          | 17/18     | 0~10               | 4XBA35-1718V10D | 128  |
|            | 790~960/1710~2170     | 8    | 35          | 18        | 0~10               | 4XBA35-18V10D   | 129  |

## Index Tri-sector & Bi-directional

| Tri-Sector & Bi-directional |                       |      |             |           |                    |                   |      |
|-----------------------------|-----------------------|------|-------------|-----------|--------------------|-------------------|------|
| Type                        | Frequency Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model             | Page |
| X-POL                       | 2300~2400             | 2    | -           | 13.5      | 0~8                | XHE360-13.5V8T    | 131  |
| XX-POL                      | 890~960/1710~2170     | 4    | 80          | 10/11     | -10~+10            | XXGA80-1011V20BC  | 132  |
| 3X-POL                      | 1710~2170             | 6    | 65          | 18        | 0~10               | 3XHA65-18V10T     | 133  |
| 6X-POL                      | 1710~2170             | 12   | 65          | 18        | 0~10               | 6XHA65-18V10T     | 134  |
|                             | 1710~2690             | 12   | 65          | 18        | 0~10               | 6XHT65-18V10T     | 135  |
|                             | 870~960/1710~2170     | 12   | 65          | 16/17     | 0~10               | 6X3G3A65-1617V10T | 136  |
| 9X-POL                      | 1710~2690             | 18   | 65          | 18        | 0~10               | 9XHT65-18V10T     | 137  |
|                             | 806~960/1710~2170     | 18   | 65          | 16/17     | 0~10               | 9X3A6A65-1617V10T | 138  |

## Index V-Pol 700~100MHz

| 700MHz ~ 1000MHz |                      |      |             |           |                    |               |      |
|------------------|----------------------|------|-------------|-----------|--------------------|---------------|------|
| Type             | Frequeny Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model         | Page |
| V-POL            | 790~960              | 1    | 65          | 15        | 0,4,8              | VLB65-15T*    | 9    |
|                  |                      | 1    | 65          | 16.5      | 0,4,8              | VLB65-16.5T*  | 10   |
|                  |                      | 1    | 65          | 18        | 0,4,8              | VLB65-18T*    | 11   |
|                  |                      | 1    | 65          | 15        | 0~14               | VLB65-15V14   | 12   |
|                  |                      | 1    | 65          | 16        | 0~10               | VLB65-16V10   | 13   |
|                  |                      | 1    | 65          | 17        | 0~10               | VLB65-17V10   | 14   |
|                  |                      | 1    | 90          | 16.5      | 0,4,8              | VLB90-16.5-T* | 15   |
|                  |                      | 1    | 90          | 16        | 0~10               | VLB90-16V10   | 16   |





# Product Specifications Sheet V series for BTS

VLB65-15T0/4/8

790~960MHz

Broad Band Single Polarization

65° Horizontal Beam Width, Fixed Tilt

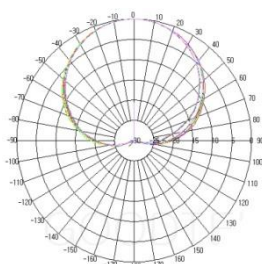


## Electrical Specifications

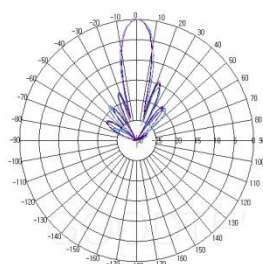
|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 14.5dBi    | 14.8dBi    | 15.1dBi    |
| Polarization                   |            | Vertical   |            |            |
| Half Power Beam width          | Horizontal | 66°        | 64°        | 62°        |
|                                | Vertical   | 14°        | 13.5°      | 13°        |
| Electrical Tilt                |            | 0°, 4°, 8° |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | -          |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 250W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | -          |            |            |
| Squint                         |            | -          |            |            |

## Mechanical Specifications

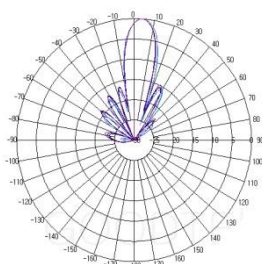
|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 265/1395/115mm           |
| Weight               |       | 7Kg                      |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 20°                 |



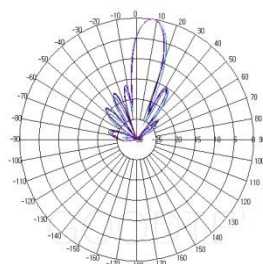
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

V POL  
700~1000MHz

# Product Specifications Sheet V series for BTS

VLB65-16.5T0/4/8

790~960MHz

Broad Band Single Polarization

65° Horizontal Beam Width, Fixed Tilt



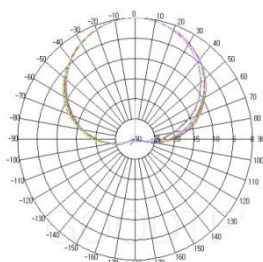
## Electrical Specifications

|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 16.2dBi    | 16.4dBi    | 16.8dBi    |
| Polarization                   |            | Vertical   |            |            |
| Half Power Beam width          | Horizontal | 66°        | 64°        | 62°        |
|                                | Vertical   | 11.2°      | 10.5°      | 9.5°       |
| Electrical Tilt                |            | 0°, 4°, 8° |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | -          |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | -          |            |            |
| Squint                         |            | -          |            |            |

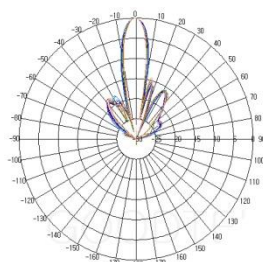
## Mechanical Specifications

|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 265/1995/115mm           |
| Weight               |       | 10Kg                     |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 10°                 |

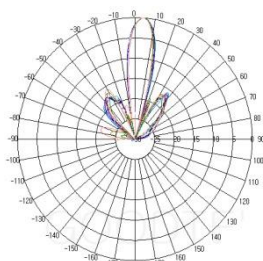
V POL  
700~1000MHz



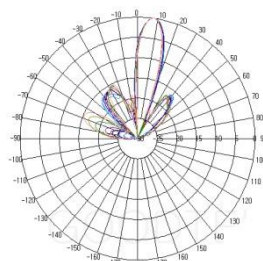
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

# Product Specifications Sheet V series for BTS

VLB65-18T0/4/8

790~960MHz

Broad Band Single Polarization

65° Horizontal Beam Width, Fixed Tilt

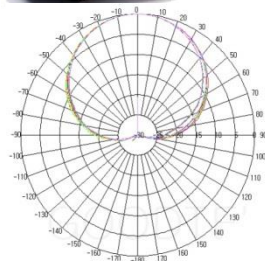
## Electrical Specifications

|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 17.2dBi    | 17.5dBi    | 17.8dBi    |
| Polarization                   |            | Vertical   |            |            |
| Half Power Beam width          | Horizontal | 66°        | 64°        | 62°        |
|                                | Vertical   | 7.5°       | 7.1°       | 6.7°       |
| Electrical Tilt                |            | 0°, 4°, 8° |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | -          |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | -          |            |            |
| Squint                         |            | -          |            |            |

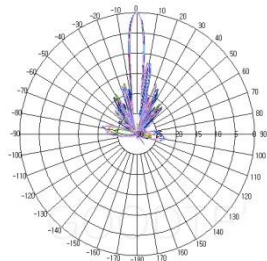
## Mechanical Specifications

|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 265/2575/115mm           |
| Weight               |       | 13Kg                     |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 7°                  |

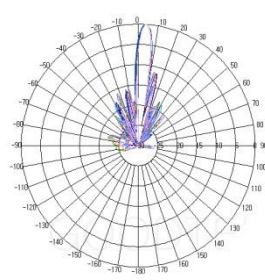
V POL  
700~1000MHz



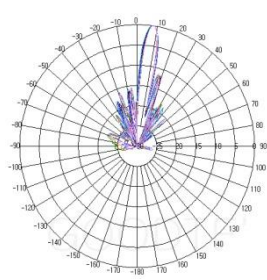
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

# Product Specifications Sheet V series for BTS

VLB65-15V14

790~960MHz

Broad Band Single Polarization

65° Horizontal Beam Width, Variable Tilt

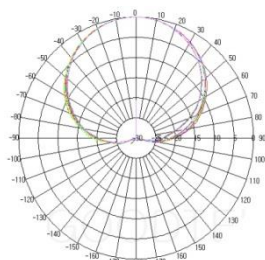


## Electrical Specifications

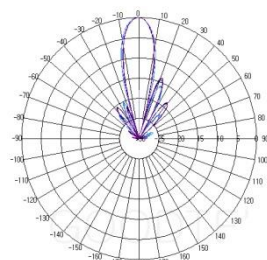
|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 14.5dBi    | 14.8dBi    | 15.1dBi    |
| Polarization                   |            | Vertical   |            |            |
| Half Power Beam width          | Horizontal | 66°        | 64°        | 62°        |
|                                | Vertical   | 14°        | 13.5°      | 13°        |
| Electrical Tilt                |            | 0°~14°     |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | -          |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 250W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | -          |            |            |
| Squint                         |            | -          |            |            |

## Mechanical Specifications

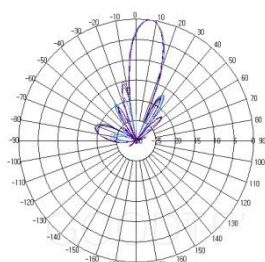
|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 265/1395/115mm           |
| Weight               |       | 7Kg                      |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 20°                 |



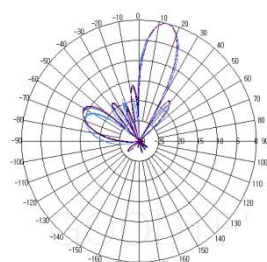
Horizontal



Vertical 0T



Vertical 7T



Vertical 14T



Install Configuration

V POL  
700~1000MHz

# Product Specifications Sheet V series for BTS

VLB65-16V10

790~960MHz

Broad Band Single Polarization

65° Horizontal Beam Width, Variable Tilt



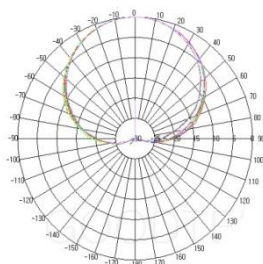
## Electrical Specifications

|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 16dBi      | 16.2dBi    | 16.4dBi    |
| Polarization                   |            | Vertical   |            |            |
| Half Power Beam width          | Horizontal | 66°        | 64°        | 62°        |
|                                | Vertical   | 11.2°      | 10.5°      | 9.5°       |
| Electrical Tilt                |            | 0°~10°     |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | -          |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | -          |            |            |
| Squint                         |            | -          |            |            |

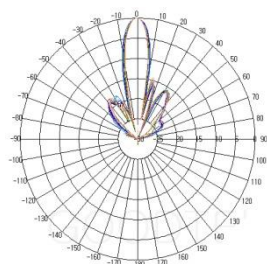
## Mechanical Specifications

|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 265/1995/115mm           |
| Weight               |       | 10Kg                     |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 10°                 |

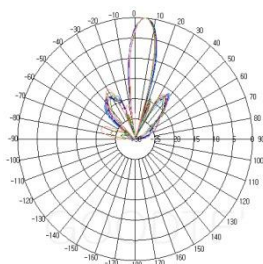
V POL  
700~1000MHz



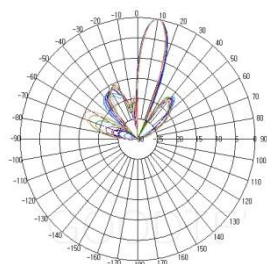
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration



# Product Specifications Sheet V series for BTS

VLB65-17V10

790~960MHz

Broad Band Single Polarization

65° Horizontal Beam Width, Variable Tilt



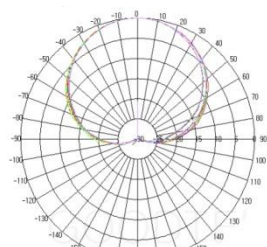
## Electrical Specifications

|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 16.8dBi    | 17.0dBi    | 17.2dBi    |
| Polarization                   |            | Vertical   |            |            |
| Half Power Beam width          | Horizontal | 66°        | 64°        | 62°        |
|                                | Vertical   | 7.5°       | 7°         | 6.7°       |
| Electrical Tilt                |            | 0°~10°     |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | -          |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | -          |            |            |
| Squint                         |            | -          |            |            |

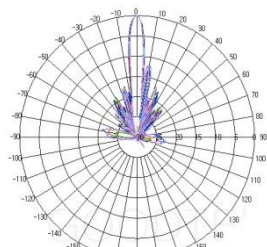
## Mechanical Specifications

|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 265/2575/115mm           |
| Weight               |       | 13Kg                     |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 7°                  |

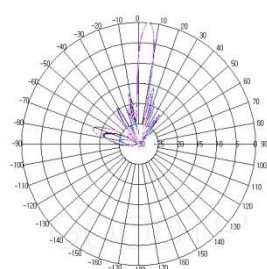
V POL  
700~1000MHz



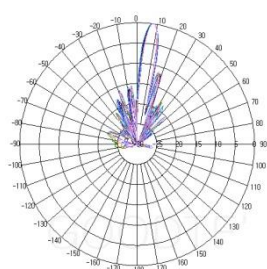
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

# Product Specifications Sheet V series for BTS

VLB90-16.5T0/4/8

790~960MHz

Broad Band Single Polarization

90° Horizontal Beam Width, Fixed Tilt



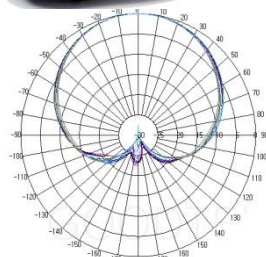
## Electrical Specifications

|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 16.2dBi    | 16.4dBi    | 16.6dBi    |
| Polarization                   |            | Vertical   |            |            |
| Half Power Beam width          | Horizontal | 90°        | 88°        | 87°        |
|                                | Vertical   | 7.5°       | 7.1°       | 6.7°       |
| Electrical Tilt                |            | 0°, 4°, 8° |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 23dB       |            |            |
| Isolation between Ports        |            | -          |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | -          |            |            |
| Squint                         |            | -          |            |            |

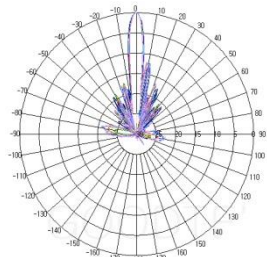
## Mechanical Specifications

|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 265/2575/115mm           |
| Weight               |       | 13Kg                     |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 7°                  |

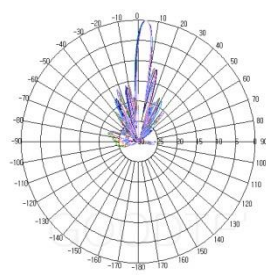
V POL  
700~1000MHz



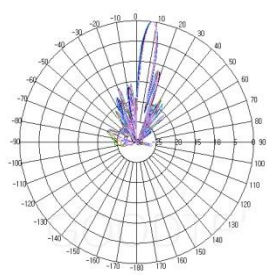
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

# Product Specifications Sheet V series for BTS

VLB90-16V10

790~960MHz

Broad Band Single Polarization

90° Horizontal Beam Width, Variable Tilt



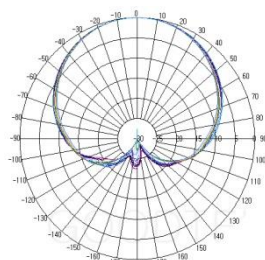
## Electrical Specifications

|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 16dBi      | 16.2dBi    | 16.4dBi    |
| Polarization                   |            | Vertical   |            |            |
| Half Power Beam width          | Horizontal | 90°        | 88°        | 87°        |
|                                | Vertical   | 7.5°       | 7°         | 6.7°       |
| Electrical Tilt                |            | 0°~10°     |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 23dB       |            |            |
| Isolation between Ports        |            | -          |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | -          |            |            |
| Squint                         |            | -          |            |            |

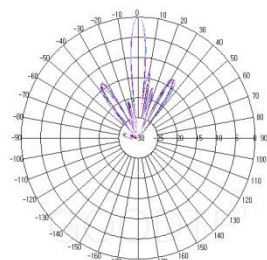
## Mechanical Specifications

|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 265/2575/115mm           |
| Weight               |       | 13Kg                     |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 7°                  |

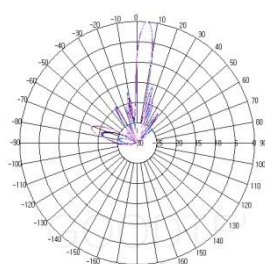
V POL  
700~1000MHz



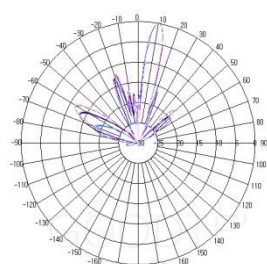
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration



## Index X-Pol 700~100MHz

| 700MHz ~ 1000MHz |                       |      |           |           |                  |                |      |
|------------------|-----------------------|------|-----------|-----------|------------------|----------------|------|
| Type             | Frequency Range (MHz) | Port | H-HPBW(°) | Gain(dBi) | Electric Tilt(°) | Model          | Page |
| X-POL            | 790~960               | 2    | 33        | 20        | 0,4,8            | XLB33-20T*     | 18   |
|                  |                       | 2    | 65        | 11        | 0                | XLB65-11T0     | 19   |
|                  |                       | 2    | 65        | 15        | 0,4,8            | XLB65-15T*     | 20   |
|                  |                       | 2    | 65        | 16.5      | 0,4,8            | XLB65-16.5T*   | 21   |
|                  |                       | 2    | 65        | 18        | 0,4,8            | XLB65-18T*     | 22   |
|                  |                       | 2    | 65        | 15        | 0~14             | XLB65-15V14    | 23   |
|                  |                       | 2    | 65        | 16        | 0~10             | XLB65-16V10    | 24   |
|                  |                       | 2    | 65        | 17        | 0~10             | XLB65-17V10    | 25   |
|                  |                       | 2    | 90        | 16.5      | 0,4,8            | XLB90-16.5-T*  | 26   |
|                  |                       | 2    | 90        | 16        | 0~10             | XLB90-16V10    | 27   |
|                  | 698~960               | 2    | 65        | 17        | 3~15             | XLT65-17V15    | 28   |
|                  |                       | 2    | 65        | 17        | 3~15             | XLT65-17V15S   | 29   |
| XX-POL           | 698~803/890~960       | 4    | 65        | 16.5      | 3~15             | XXLJG65-17V15S | 30   |



# Product Specifications Sheet X series for BTS

XLB33-20T0/4/8

790~960MHz

Broad Band Dual Polarization

33° Horizontal Beam Width, Fixed Tilt

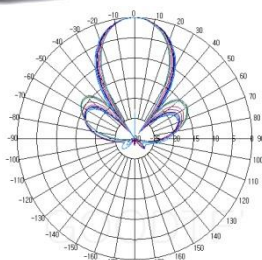
## Electrical Specifications

|                                |            |                  |            |            |
|--------------------------------|------------|------------------|------------|------------|
| Frequency Band                 |            | 790~866MHz       | 824~894MHz | 890~960MHz |
| Gain                           |            | 19.1dBi          | 19.3dBi    | 19.6dBi    |
| Polarization                   |            | ±45°             |            |            |
| Half Power Beam width          | Horizontal | 34°              | 32°        | 30°        |
|                                | Vertical   | 7.5°             | 7.1°       | 6.7°       |
| Electrical Tilt                |            | 0°, 4°, 8°, ±60° |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB             |            |            |
| Front-to-Back Ratio            |            | 25dB             |            |            |
| Isolation between Ports        |            | 30dB             |            |            |
| VSWR                           |            | 1.5:1            |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc          |            |            |
| Maximum Input Power            |            | 300W             |            |            |
| Impedance                      |            | 50Ω              |            |            |
| Cross Polar Ratio              | 0°         | -                |            |            |
|                                | ±60°       | -                |            |            |
| Tracking                       |            | 2dB              |            |            |
| Squint                         |            | ±2.5°            |            |            |

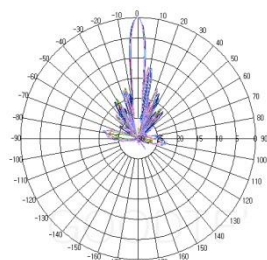
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 550/2575/115mm               |
| Weight               |       | 25Kg                         |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 7°                      |

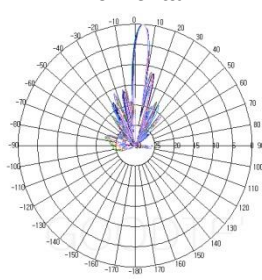
X POL  
700~1000MHz



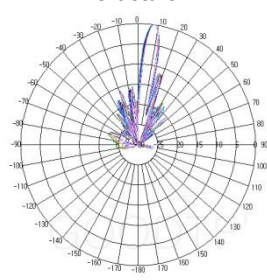
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

# Product Specifications Sheet X series for BTS

XLB65-13T0/4/8

790~960MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Fixed Tilt

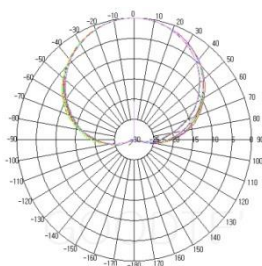


## Electrical Specifications

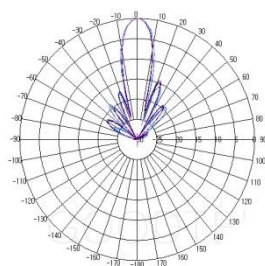
|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 12.8dBi    | 13.2dBi    | 13.5dBi    |
| Polarization                   |            | ±45°       |            |            |
| Half Power Beam width          | Horizontal | 66°        | 64°        | 62°        |
|                                | Vertical   | 25°        | 23°        | 21°        |
| Electrical Tilt                |            | 0°         |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | 30dB       |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 250W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | 20dB       |            |            |
|                                | ±60°       | 10dB       | 10dB       | 8dB        |
| Tracking                       |            | 2dB        |            |            |
| Squint                         |            | ±2.5°      |            |            |

## Mechanical Specifications

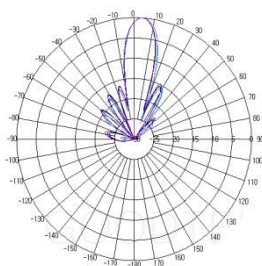
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/895/115mm                |
| Weight               |       | 7Kg                          |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



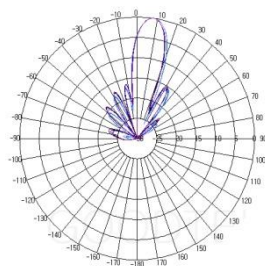
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

X POL  
700~1000MHz

# Product Specifications Sheet X series for BTS

XLB65-15T0/4/8

790~960MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Fixed Tilt

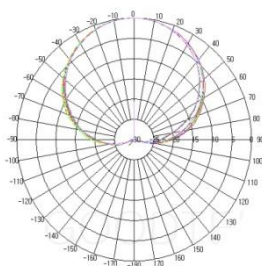


## Electrical Specifications

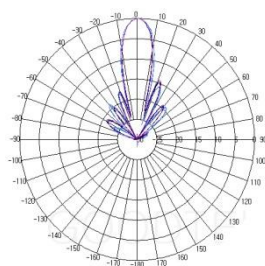
|                                |            |             |            |            |
|--------------------------------|------------|-------------|------------|------------|
| Frequency Band                 |            | 790~866MHz  | 824~894MHz | 890~960MHz |
| Gain                           |            | 14.5dBi     | 14.8dBi    | 15.1dBi    |
| Polarization                   |            | ±45°        |            |            |
| Half Power Beam width          | Horizontal | 66°         | 64°        | 62°        |
|                                | Vertical   | 14°         | 13.5°      | 13°        |
| Electrical Tilt                |            | 0°, 4°, 8°, |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB        |            |            |
| Front-to-Back Ratio            |            | 25dB        |            |            |
| Isolation between Ports        |            | 30dB        |            |            |
| VSWR                           |            | 1.5:1       |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc     |            |            |
| Maximum Input Power            |            | 250W        |            |            |
| Impedance                      |            | 50Ω         |            |            |
| Cross Polar Ratio              | 0°         | 20dB        |            |            |
|                                | ±60°       | 10dB        | 10dB       | 8dB        |
| Tracking                       |            | 2dB         |            |            |
| Squint                         |            | ±2.5°       |            |            |

## Mechanical Specifications

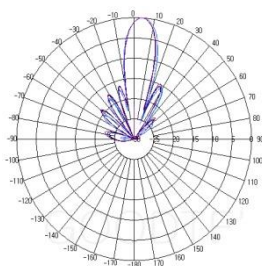
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1395/115mm               |
| Weight               |       | 7Kg                          |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



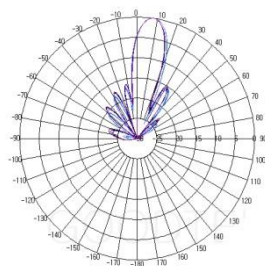
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

X POL  
700~1000MHz

# Product Specifications Sheet X series for BTS

**XLB65-16.5T0/4/8**

**790~960MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Fixed Tilt**



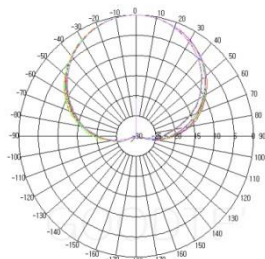
## Electrical Specifications

|                                |            |             |            |            |
|--------------------------------|------------|-------------|------------|------------|
| Frequency Band                 |            | 790~866MHz  | 824~894MHz | 890~960MHz |
| Gain                           |            | 16.2dBi     | 16.4dBi    | 16.8dBi    |
| Polarization                   |            | ±45°        |            |            |
| Half Power Beam width          | Horizontal | 66°         | 64°        | 62°        |
|                                | Vertical   | 11.2°       | 10.5°      | 9.5°       |
| Electrical Tilt                |            | 0°, 4°, 8°, |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB        |            |            |
| Front-to-Back Ratio            |            | 25dB        |            |            |
| Isolation between Ports        |            | 30dB        |            |            |
| VSWR                           |            | 1.5:1       |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc     |            |            |
| Maximum Input Power            |            | 300W        |            |            |
| Impedance                      |            | 50Ω         |            |            |
| Cross Polar Ratio              | 0°         | 20dB        |            |            |
|                                | ±60°       | 10dB        | 10dB       | 8dB        |
| Tracking                       |            | 2dB         |            |            |
| Squint                         |            | ±2.5°       |            |            |

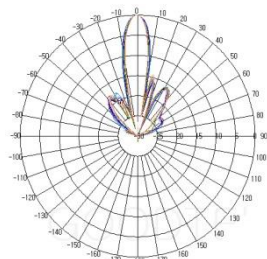
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1995/115mm               |
| Weight               |       | 10Kg                         |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

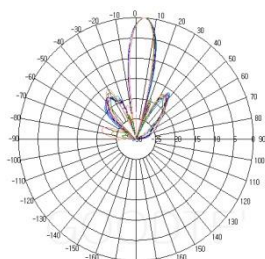
X POL  
700~1000MHz



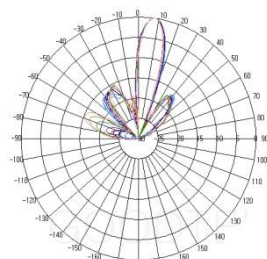
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration



# Product Specifications Sheet X series for BTS

**XLB65-18T0/4/8**

**790~960MHz**

**Broad Band Dual Polarization**

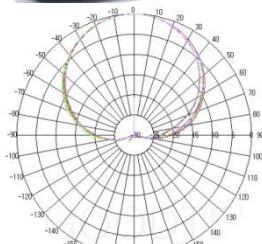
**65° Horizontal Beam Width, Fixed Tilt**

## Electrical Specifications

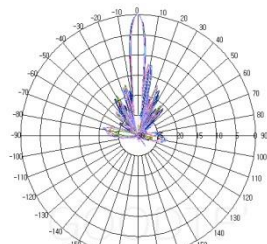
|                                |            |             |            |            |
|--------------------------------|------------|-------------|------------|------------|
| Frequency Band                 |            | 790~866MHz  | 824~894MHz | 890~960MHz |
| Gain                           |            | 17.2dBi     | 17.5dBi    | 17.8dBi    |
| Polarization                   |            | ±45°        |            |            |
| Half Power Beam width          | Horizontal | 66°         | 64°        | 62°        |
|                                | Vertical   | 7.5°        | 7.1°       | 6.7°       |
| Electrical Tilt                |            | 0°, 4°, 8°, |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB        |            |            |
| Front-to-Back Ratio            |            | 25dB        |            |            |
| Isolation between Ports        |            | 30dB        |            |            |
| VSWR                           |            | 1.5:1       |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc     |            |            |
| Maximum Input Power            |            | 300W        |            |            |
| Impedance                      |            | 50Ω         |            |            |
| Cross Polar Ratio              | 0°         | 20dB        |            |            |
|                                | ±60°       | 10dB        | 10dB       | 8dB        |
| Tracking                       |            | 2dB         |            |            |
| Squint                         |            | ±2.5°       |            |            |

## Mechanical Specifications

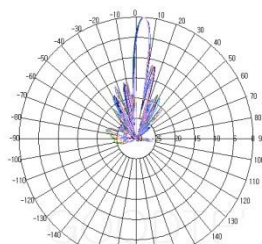
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/115mm               |
| Weight               |       | 13Kg                         |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 7°                      |



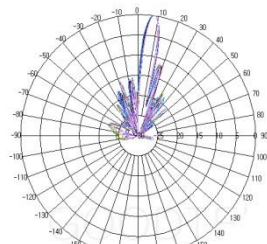
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

X POL  
700~1000MHz

# Product Specifications Sheet X series for BTS

**XLB65-15V14**

**790~960MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Variable Tilt**

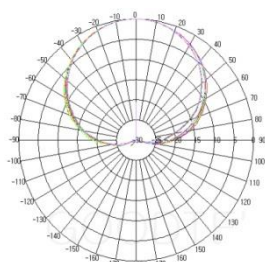


## Electrical Specifications

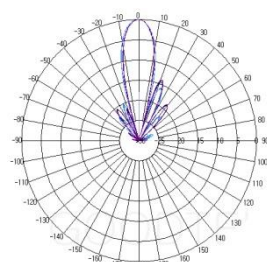
|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 14.5dBi    | 14.8dBi    | 15.1dBi    |
| Polarization                   |            | ±45°       |            |            |
| Half Power Beam width          | Horizontal | 66°        | 64°        | 62°        |
|                                | Vertical   | 14°        | 13.5°      | 13°        |
| Electrical Tilt                |            | 0°~14°     |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | 30dB       |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 250W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | 20dB       |            |            |
|                                | ±60°       | 10dB       | 10dB       | 8dB        |
| Tracking                       |            | 2dB        |            |            |
| Squint                         |            | ±2.5°      |            |            |

## Mechanical Specifications

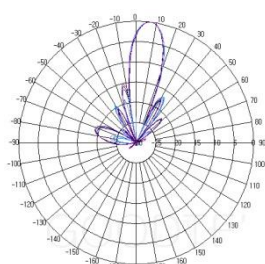
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1395/115mm               |
| Weight               |       | 7Kg                          |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



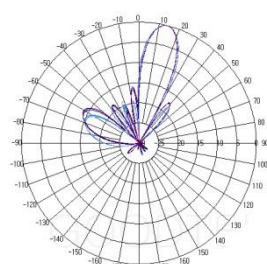
Horizontal



Vertical 0T



Vertical 7T



Vertical 14T



Install Configuration

X POL  
700~1000MHz



# Product Specifications Sheet X series for BTS

**XLB65-16V10**

**790~960MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Variable Tilt**



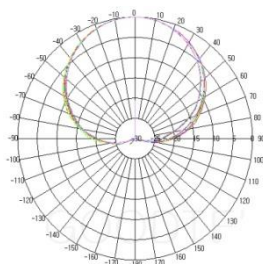
## Electrical Specifications

|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 16.0dBi    | 16.2dBi    | 16.4dBi    |
| Polarization                   |            | ±45°       |            |            |
| Half Power Beam width          | Horizontal | 66°        | 64°        | 62°        |
|                                | Vertical   | 11.2°      | 10.5°      | 9.5°       |
| Electrical Tilt                |            | 0°~10°,    |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | 30dB       |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | 20dB       |            |            |
|                                | ±60°       | 10dB       | 10dB       | 8dB        |
| Tracking                       |            | 2dB        |            |            |
| Squint                         |            | ±2.5°      |            |            |

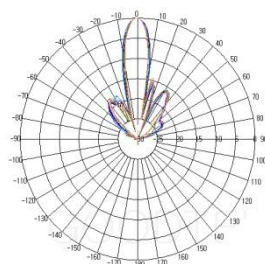
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1995/115mm               |
| Weight               |       | 10Kg                         |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

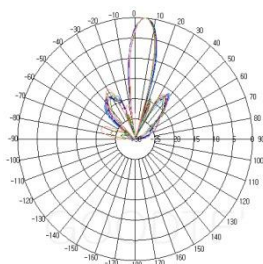
X POL  
700~1000MHz



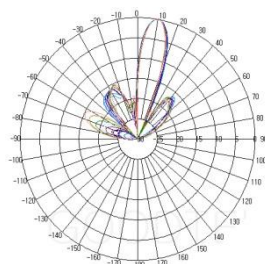
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

# Product Specifications Sheet X series for BTS

XLB65-17V10

790~960MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Variable Tilt

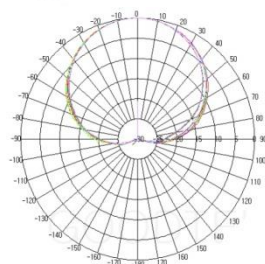


## Electrical Specifications

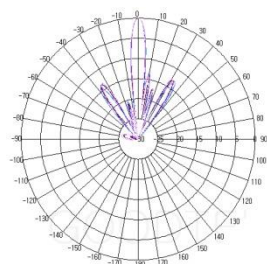
|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 16.8dBi    | 17.0dBi    | 17.2dBi    |
| Polarization                   |            | ±45°       |            |            |
| Half Power Beam width          | Horizontal | 66°        | 64°        | 62°        |
|                                | Vertical   | 7.5°       | 7°         | 6.7°       |
| Electrical Tilt                |            | 0°~10°,    |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | 30dB       |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | 20dB       |            |            |
|                                | ±60°       | 10dB       | 10dB       | 8dB        |
| Tracking                       |            | 2dB        |            |            |
| Squint                         |            | ±2.5°      |            |            |

## Mechanical Specifications

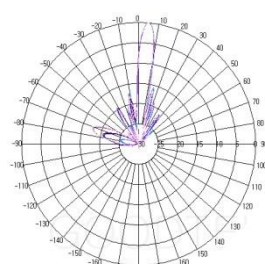
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/115mm               |
| Weight               |       | 13Kg                         |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 7°                      |



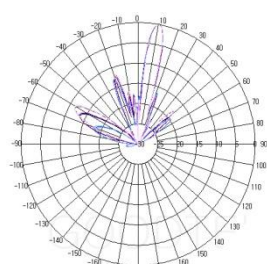
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

X POL  
700~1000MHz

# Product Specifications Sheet X series for BTS

XLB90-16.5T0/4/8

790~960MHz

Broad Band Dual Polarization

90° Horizontal Beam Width, Fixed Tilt

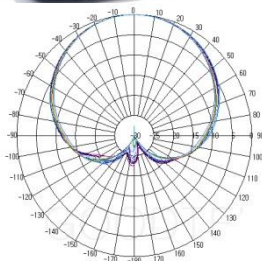


## Electrical Specifications

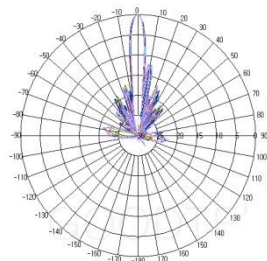
|                                |            |                  |            |            |
|--------------------------------|------------|------------------|------------|------------|
| Frequency Band                 |            | 790~866MHz       | 824~894MHz | 890~960MHz |
| Gain                           |            | 16.2dBi          | 16.4dBi    | 16.6dBi    |
| Polarization                   |            | ±45°             |            |            |
| Half Power Beam width          | Horizontal | 90°              | 88°        | 87°        |
|                                | Vertical   | 7.5°             | 7.1°       | 6.7°       |
| Electrical Tilt                |            | 0°, 4°, 8°, ±60° |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB             |            |            |
| Front-to-Back Ratio            |            | 25dB             |            |            |
| Isolation between Ports        |            | 30dB             |            |            |
| VSWR                           |            | 1.5:1            |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc          |            |            |
| Maximum Input Power            |            | 300W             |            |            |
| Impedance                      |            | 50Ω              |            |            |
| Cross Polar Ratio              | 0°         | -                |            |            |
|                                | ±60°       | -                |            |            |
| Tracking                       |            | 2dB              |            |            |
| Squint                         |            | ±2.5°            |            |            |

## Mechanical Specifications

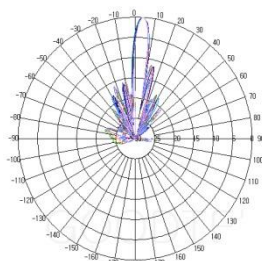
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/115mm               |
| Weight               |       | 13Kg                         |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 7°                      |



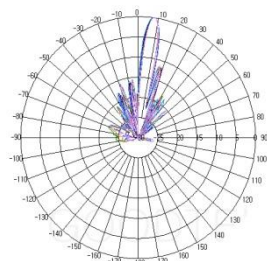
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

X POL  
700~1000MHz

# Product Specifications Sheet X series for BTS

**XLB90-16V10**

**790~960MHz**

**Broad Band Dual Polarization**

**90° Horizontal Beam Width, Variable Tilt**

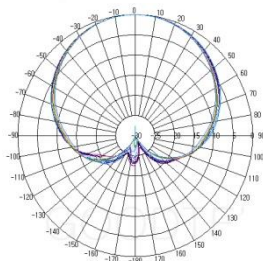


## Electrical Specifications

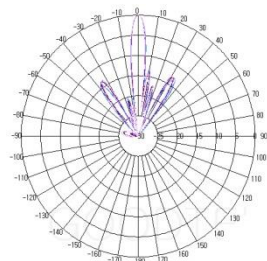
|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 790~866MHz | 824~894MHz | 890~960MHz |
| Gain                           |            | 16dBi      | 16.2dBi    | 16.4dBi    |
| Polarization                   |            | ±45°       |            |            |
| Half Power Beam width          | Horizontal | 90°        | 88°        | 87°        |
|                                | Vertical   | 7.5°       | 7°         | 6.7°       |
| Electrical Tilt                |            | 0°~10°,    |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | 30dB       |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | 2dB        |            |            |
| Squint                         |            | ±2.5°      |            |            |

## Mechanical Specifications

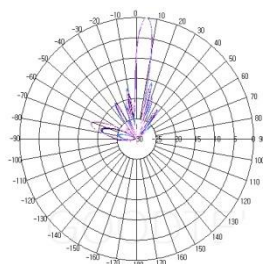
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/115mm               |
| Weight               |       | 13Kg                         |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 7°                      |



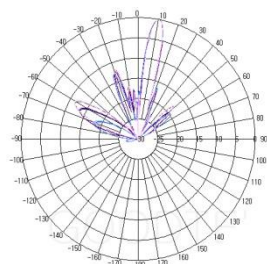
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

X POL  
700~1000MHz

# Product Specifications Sheet X series for BTS

**XLT65-17V15**

**698~960MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Variable Tilt**

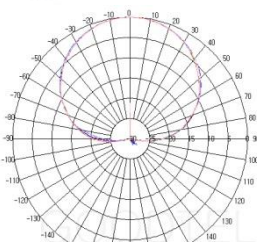


## Electrical Specifications

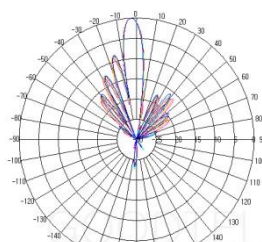
|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 698~803MHz | 806~894MHz | 890~960MHz |
| Gain                           |            | 16.4dBi    | 17dBi      | 17.4dBi    |
| Polarization                   |            | ±45°       |            |            |
| Half Power Beam width          | Horizontal | 68°        | 65°        | 62°        |
|                                | Vertical   | 8.5°       | 7.5°       | 6.7°       |
| Electrical Tilt                |            | 3°~15°     |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | 30dB       |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | 2dB        |            |            |
| Squint                         |            | ±2.5°      |            |            |

## Mechanical Specifications

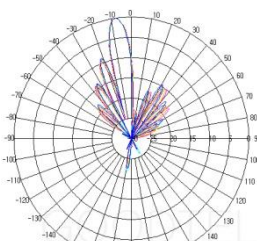
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/145mm               |
| Weight               |       | 15Kg                         |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 7°                      |



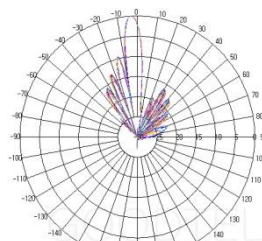
Horizontal



Vertical 3T



Vertical 9T



Vertical 15T



Install Configuration

X POL  
700~1000MHz



# Product Specifications Sheet X series for BTS

**XLT65-17V15S**

**698~960MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Variable Tilt**

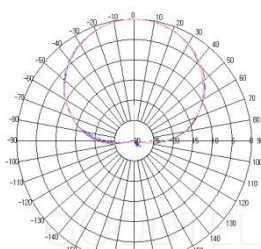
## Electrical Specifications

|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Frequency Band                 |            | 698~803MHz | 806~894MHz | 890~960MHz |
| Gain                           |            | 16.4dBi    | 17dBi      | 17.4dBi    |
| Polarization                   |            | ±45°       |            |            |
| Half Power Beam width          | Horizontal | 68°        | 65°        | 62°        |
|                                | Vertical   | 8.5°       | 7.5°       | 6.7°       |
| Electrical Tilt                |            | 3°~15°     |            |            |
| Upper 1st Sidelobe Suppression |            | 15dB       |            |            |
| Front-to-Back Ratio            |            | 25dB       |            |            |
| Isolation between Ports        |            | 30dB       |            |            |
| VSWR                           |            | 1.5:1      |            |            |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |            |            |
| Maximum Input Power            |            | 300W       |            |            |
| Impedance                      |            | 50Ω        |            |            |
| Cross Polar Ratio              | 0°         | -          |            |            |
|                                | ±60°       | -          |            |            |
| Tracking                       |            | 2dB        |            |            |
| Squint                         |            | ±2.5°      |            |            |

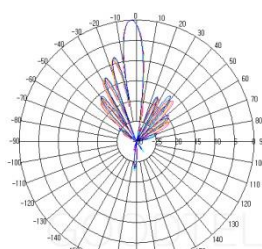
## Mechanical Specifications

|                      |     |                              |
|----------------------|-----|------------------------------|
| Dimension            | Ø/H | 250/2575mm                   |
| Weight               |     | 15Kg                         |
| Connector Type       |     | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |     | 60m/s                        |
| Radome Material      |     | ASA (prevent UV)             |
| Mechanical Down Tilt |     | 0° ~ 7°                      |

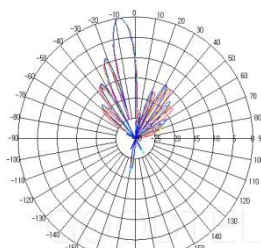
X POL  
700~1000MHz



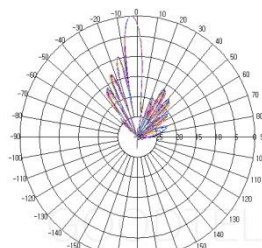
Horizontal



Vertical 3T



Vertical 9T



Vertical 15T



Install Configuration



# Product Specifications Sheet X series for BTS

XLJG65-17V15S

698~803 / 890~960MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Variable Tilt

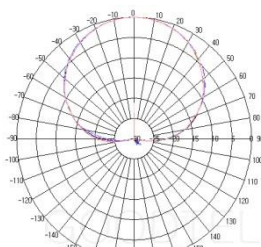
## Electrical Specifications

|                                |                |                          |            |
|--------------------------------|----------------|--------------------------|------------|
| Frequency Band                 |                | 698~803MHz               | 890~960MHz |
| Gain                           |                | 16.4dBi                  | 16.7dBi    |
| Polarization                   |                | $\pm 45^\circ$           |            |
| Half Power Beam width          | Horizontal     | 68°                      | 62°        |
|                                | Vertical       | 8.5°                     | 6.7°       |
| Electrical Tilt                |                | 3°~15° (Independent RET) |            |
| Upper 1st Sidelobe Suppression |                | 15dB                     |            |
| Front-to-Back Ratio            |                | 25dB                     |            |
| Isolation between Ports        |                | 30dB                     |            |
| VSWR                           |                | 1.5:1                    |            |
| Intermodulation IM3            | 2 x 43dBm      | -150dBc                  |            |
| Maximum Input Power            |                | 300W                     |            |
| Impedance                      |                | 50Ω                      |            |
| Cross Polar Ratio              | 0°             | -                        |            |
|                                | $\pm 60^\circ$ | -                        |            |
| Tracking                       |                | 2dB                      |            |
| Squint                         |                | $\pm 2.5^\circ$          |            |

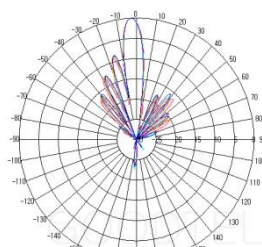
## Mechanical Specifications

|                      |     |                              |
|----------------------|-----|------------------------------|
| Dimension            | Ø/H | 250/2575mm                   |
| Weight               |     | 15Kg                         |
| Connector Type       |     | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |     | 60m/s                        |
| Radome Material      |     | ASA (prevent UV)             |
| Mechanical Down Tilt |     | 0° ~ 7°                      |

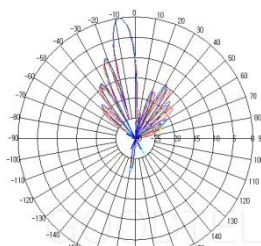
XX POL  
700~1000MHz



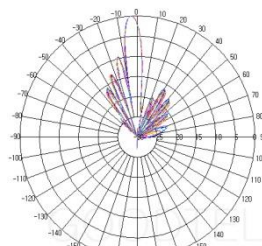
Horizontal



Vertical 3T



Vertical 9T



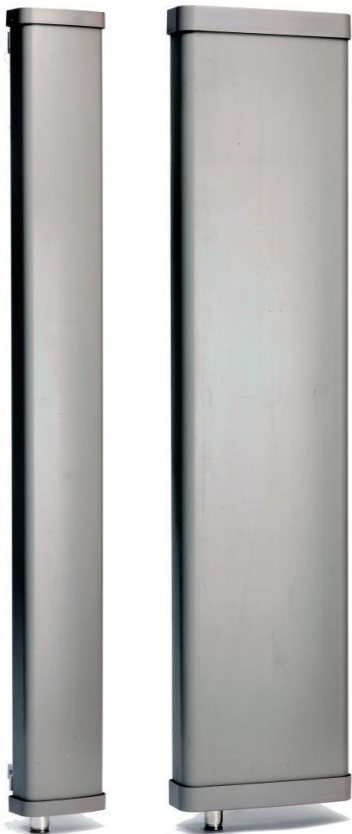
Vertical 15T



Install Configuration

Index V-Pol 1700~2200MHz

| 1700MHz ~ 2200MHz |                      |      |             |           |                    |              |      |
|-------------------|----------------------|------|-------------|-----------|--------------------|--------------|------|
| Type              | Frequeny Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model        | Page |
| V-POL             | 1710~2170            | 1    | 33          | 20        | 0,2,6              | VHA33-20T*   | 32   |
|                   |                      | 1    | 45          | 19        | 0,2,6              | VHA45-19T*   | 33   |
|                   |                      | 1    | 65          | 15.5      | 0,2,6              | VHA65-15.5T* | 34   |
|                   |                      | 1    | 65          | 18        | 0,2,6              | VHA65-18T*   | 35   |



# Product Specifications Sheet V series for BTS

VHA33-20T0/2/6

1710~2170MHz

Broad Band Single Polarization

33° Horizontal Beam Width, Fixed Tilt

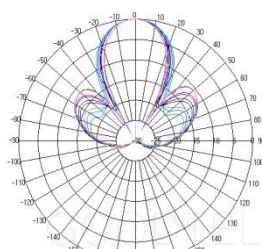


## Electrical Specifications

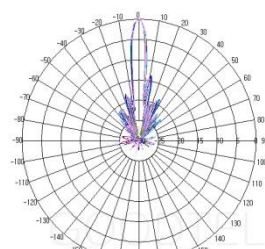
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 19.5dBi      | 19.9dBi      | 20.3dBi      |
| Polarization                   |            | Vertical     |              |              |
| Half Power Beam width          | Horizontal | 34°          | 32°          | 30°          |
|                                | Vertical   | 6.7°         | 6.1°         | 5.7°         |
| Electrical Tilt                |            |              | 0°, 2°, 6°   |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 25dB         |              |
| Isolation between Ports        |            |              | -            |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            |              | 300W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              | 0°         | -            |              |              |
|                                | ±60°       | -            |              |              |
| Tracking                       |            |              | -            |              |
| Squint                         |            |              | -            |              |

## Mechanical Specifications

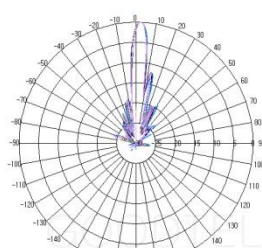
|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 263/1348/78mm            |
| Weight               |       | 5Kg                      |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 20°                 |



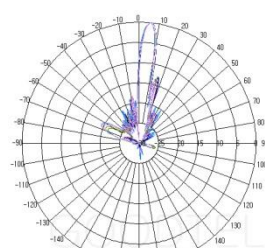
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration

V POL  
1700~2200MHz

# Product Specifications Sheet V series for BTS

VHA45-19T0/2/6

1710~2170MHz  
Broad Band Single Polarization  
45° Horizontal Beam Width, Fixed Tilt

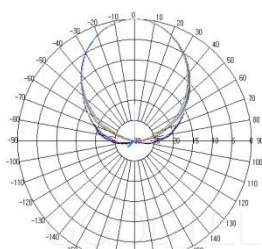


## Electrical Specifications

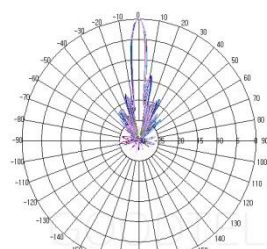
| Frequency Band                 |            | 1710~<br>1880MHz | 1850~<br>1990MHz | 1920~<br>2170MHz |
|--------------------------------|------------|------------------|------------------|------------------|
| Gain                           |            | 18.8dBi          | 19.1dBi          | 19.4dBi          |
| Polarization                   |            | Vertical         |                  |                  |
| Half Power Beam width          | Horizontal |                  | 45°              |                  |
|                                | Vertical   | 6.7°             | 6.1°             | 5.7°             |
| Electrical Tilt                |            |                  | 0°, 2°, 6°       |                  |
| Upper 1st Sidelobe Suppression |            |                  | 15dB             |                  |
| Front-to-Back Ratio            |            |                  | 25dB             |                  |
| Isolation between Ports        |            |                  | -                |                  |
| VSWR                           |            |                  | 1.5:1            |                  |
| Intermodulation IM3            | 2 x 43dBm  |                  | -150dBc          |                  |
| Maximum Input Power            |            |                  | 300W             |                  |
| Impedance                      |            |                  | 50Ω              |                  |
| Cross Polar Ratio              | 0°         | -                |                  |                  |
|                                | ±60°       | -                |                  |                  |
| Tracking                       |            |                  | -                |                  |
| Squint                         |            |                  | -                |                  |

## Mechanical Specifications

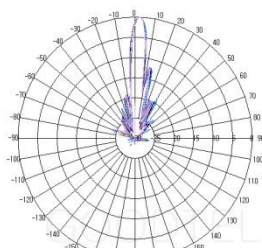
|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 263/1348/78mm            |
| Weight               |       | 5Kg                      |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 20°                 |



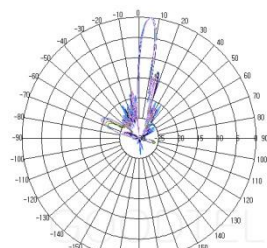
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration

V POL  
1700~2200MHz

# Product Specifications Sheet V series for BTS

VHA65-15.5T0/2/6

1710~2170MHz  
Broad Band Single Polarization  
65° Horizontal Beam Width, Fixed Tilt



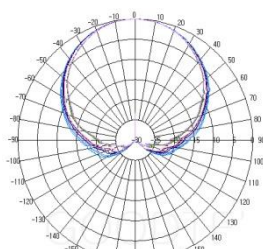
## Electrical Specifications

| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 15.2dBi      | 15.4dBi      | 15.7dBi      |
| Polarization                   |            | Vertical     |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 13°          | 12.2°        | 11.2°        |
| Electrical Tilt                |            |              | 0°, 2°, 6°   |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 25dB         |              |
| Isolation between Ports        |            |              | -            |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |              | -150dBc      |              |
| Maximum Input Power            |            |              | 250W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              | 0°         | -            |              |              |
|                                | ±60°       | -            |              |              |
| Tracking                       |            |              | -            |              |
| Squint                         |            |              | -            |              |

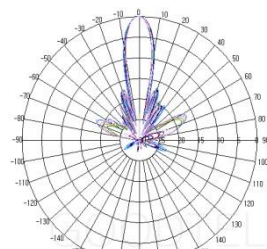
## Mechanical Specifications

|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 120/790/60mm             |
| Weight               |       | 2Kg                      |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 20°                 |

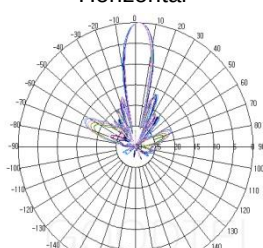
V POL  
1700~2200MHz



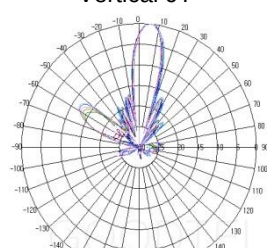
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration



# Product Specifications Sheet V series for BTS

VHA65-18T0/2/6

1710~2170MHz  
Broad Band Single Polarization  
65° Horizontal Beam Width, Fixed Tilt



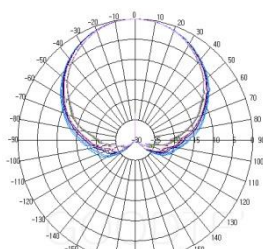
## Electrical Specifications

| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 17.5dBi      | 17.8dBi      | 18.1dBi      |
| Polarization                   |            | Vertical     |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 6.7°         | 6.1°         | 5.7°         |
| Electrical Tilt                |            |              | 0°, 2°, 6°   |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 25dB         |              |
| Isolation between Ports        |            |              | -            |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            |              | 300W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              | 0°         | -            |              |              |
|                                | ±60°       | -            |              |              |
| Tracking                       |            |              | -            |              |
| Squint                         |            |              | -            |              |

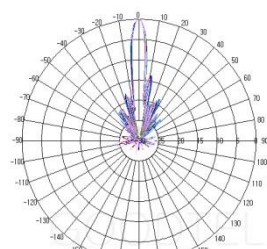
## Mechanical Specifications

|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 120/1348/60mm            |
| Weight               |       | 3Kg                      |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                    |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0° ~ 20°                 |

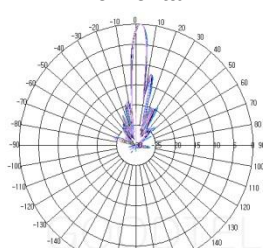
V POL  
1700~2200MHz



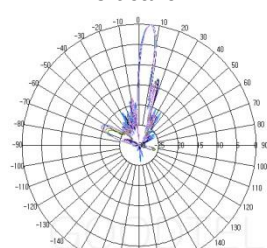
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration



## Index X-Pol 1700~2200MHz

| 1700MHz ~ 2200MHz |                      | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model          | Page |
|-------------------|----------------------|------|-------------|-----------|--------------------|----------------|------|
| Type              | Frequeny Range (MHz) |      |             |           |                    |                |      |
| X-POL             | 1710~2170            | 2    | 33          | 20.5      | 0,2,6              | XHA33-20.5T*   | 37   |
|                   |                      | 2    | 45          | 19        | 0,2,6              | XHA45-19T*     | 38   |
|                   |                      | 2    | 65          | 15.5      | 0,2,6              | XHA65-15.5T*   | 39   |
|                   |                      | 2    | 65          | 18        | 0,2,6              | XHA65-18T*     | 40   |
|                   |                      | 2    | 65          | 20        | 0,2,6              | XHA65-20T*     | 41   |
|                   |                      | 2    | 90          | 16.5      | 0,2,6              | XHA90-16.5T*   | 42   |
|                   |                      | 2    | 33          | 21        | 0~10               | XHA33-20.5V10  | 43   |
|                   |                      | 2    | 33          | 24        | 0~6                | XHA33-24V6     | 44   |
|                   |                      | 2    | 45          | 19        | 0~10               | XHA45-19V10    | 45   |
|                   |                      | 2    | 65          | 15.5      | 0~14               | XHA65-15.5V14  | 46   |
|                   |                      | 2    | 65          | 16.5      | 0~10               | XHA65-16.5V10  | 47   |
|                   |                      | 2    | 65          | 17.5      | 0~10               | XHA65-17.5V10  | 48   |
|                   |                      | 2    | 65          | 19        | 0~6                | XHA65-19V6     | 49   |
|                   |                      | 2    | 65          | 21        | 0~6                | XHA65-21V6     | 50   |
|                   |                      | 2    | 65          | 16.5      | 0~8                | XHA65-16.5V8S  | 51   |
| XX-POL            | 1710~2170            | 4    | 65          | 18        | 0,2,6              | XXHA65-18T*    | 52   |
|                   |                      | 4    | 65          | 17.5      | 0~10               | XXHA65-17.5V10 | 53   |
|                   | 1710~1880            | 4    | 65          | 17        | 0~10               | XXHD65-17V10   | 54   |
|                   |                      | 4    | 65          | 18.5      | 0~10               | XXHA65-18.5V10 | 55   |



# Product Specifications Sheet X series for BTS

XHA33-20.5T0/2/6

1710~2170MHz

Broad Band Dual Polarization

33° Horizontal Beam Width, Fixed Tilt

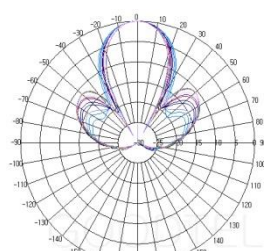


## Electrical Specifications

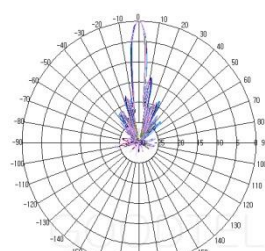
|                                |            |              |              |              |
|--------------------------------|------------|--------------|--------------|--------------|
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
| Gain                           |            | 20.1dBi      | 20.4dBi      | 20.7dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 34°          | 32°          | 30°          |
|                                | Vertical   | 6.7°         | 6.1°         | 5.7°         |
| Electrical Tilt                |            | 0°, 2°, 6°   |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 25dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            | 300W         |              |              |
| Impedance                      |            | 50Ω          |              |              |
| Cross Polar Ratio              | 0°         | -            |              |              |
|                                | ±60°       | -            |              |              |
| Tracking                       |            | 2dB          |              |              |
| Squint                         |            | ±2.5°        |              |              |

## Mechanical Specifications

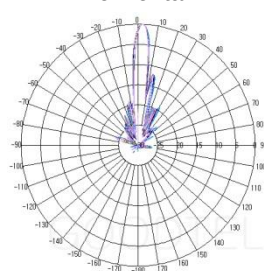
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 263/1348/78mm                |
| Weight               |       | 5.5Kg                        |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



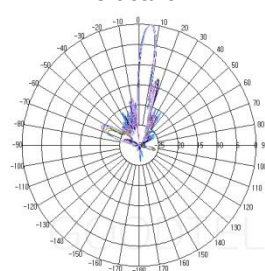
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration

X POL  
1700~2200MHz

# Product Specifications Sheet X series for BTS

XHA45-19T0/2/6

1710~2170MHz  
Broad Band Dual Polarization  
45° Horizontal Beam Width, Fixed Tilt

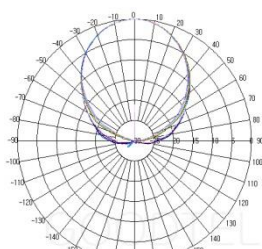


## Electrical Specifications

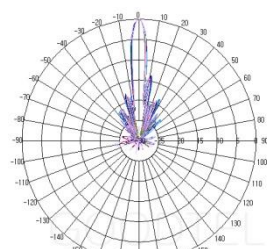
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 18.8dBi      | 19.1dBi      | 19.4dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 45°          |              |              |
|                                | Vertical   | 6.7°         | 6.1°         | 5.7°         |
| Electrical Tilt                |            | 0°, 2°, 6°   |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 25dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            | 300W         |              |              |
| Impedance                      |            | 50Ω          |              |              |
| Cross Polar Ratio              | 0°         | -            |              |              |
|                                | ±60°       | -            |              |              |
| Tracking                       |            | -            |              |              |
| Squint                         |            | -            |              |              |

## Mechanical Specifications

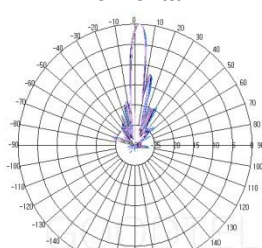
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 263/1348/78mm                |
| Weight               |       | 5Kg                          |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



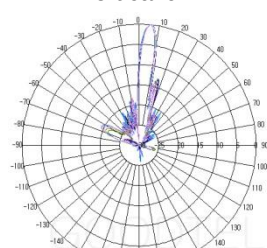
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration

X POL  
1700~2200MHz

# Product Specifications Sheet X series for BTS

XHA65-15.5T0/2/6

1710~2170MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt

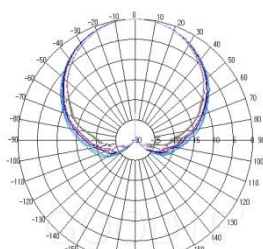


## Electrical Specifications

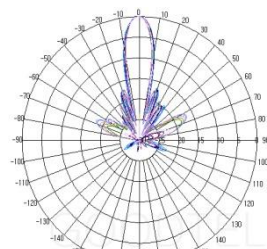
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 15.2dBi      | 15.4dBi      | 15.7dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 13°          | 12.2°        | 11.2°        |
| Electrical Tilt                |            |              | 0°, 2°, 6°   |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 25dB         |              |
| Isolation between Ports        |            |              | 30dB         |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            |              | 250W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |              |
|                                | ±60°       | 10dB         | 10dB         | 8dB          |
| Tracking                       |            |              | 2dB          |              |
| Squint                         |            |              | ±2.5°        |              |

## Mechanical Specifications

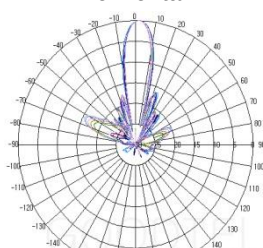
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 120/790/60mm                 |
| Weight               |       | 2Kg                          |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



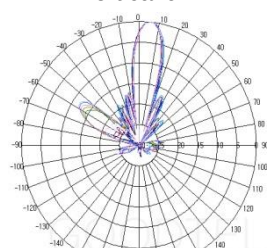
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration

X POL  
1700~2200MHz

# Product Specifications Sheet X series for BTS

XHA65-18T0/2/6

1710~2170MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt



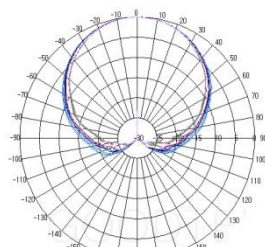
## Electrical Specifications

| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 17.5dBi      | 17.8dBi      | 18.1dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 6.7°         | 6.1°         | 5.7°         |
| Electrical Tilt                |            |              | 0°, 2°, 6°   |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 25dB         |              |
| Isolation between Ports        |            |              | 30dB         |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |              | -150dBc      |              |
| Maximum Input Power            |            |              | 300W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              | 0°         |              | 20dB         |              |
|                                | ±60°       | 10dB         | 10dB         | 8dB          |
| Tracking                       |            |              | 2dB          |              |
| Squint                         |            |              | ±2.5°        |              |

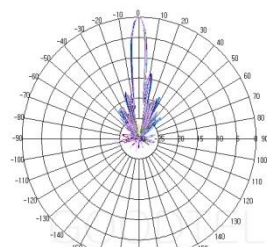
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 120/1348/60mm                |
| Weight               |       | 3.5Kg                        |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

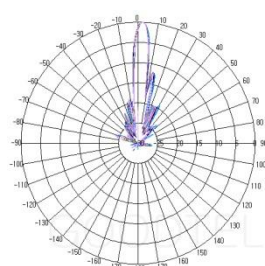
X POL  
1700~2200MHz



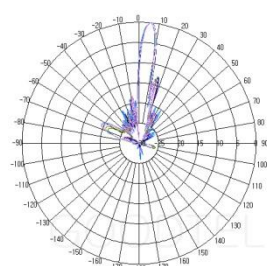
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration



# Product Specifications Sheet X series for BTS

XHA65-20T0/2/6

1710~2170MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Fixed Tilt

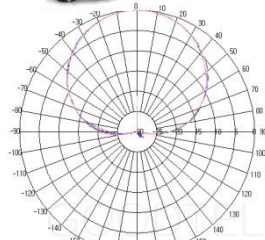
## Electrical Specifications

| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 19.5dBi      | 19.8dBi      | 20.1dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 4.7°         | 4.3°         | 4.1°         |
| Electrical Tilt                |            |              | 0°, 2°, 6°   |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 25dB         |              |
| Isolation between Ports        |            |              | 30dB         |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |              | -150dBc      |              |
| Maximum Input Power            |            |              | 300W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              | 0°         |              | 20dB         |              |
|                                | ±60°       | 10dB         | 10dB         | 8dB          |
| Tracking                       |            |              | 2dB          |              |
| Squint                         |            |              | ±2.5°        |              |

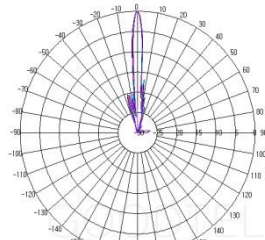
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 120/1950/60mm                |
| Weight               |       | 5.5Kg                        |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

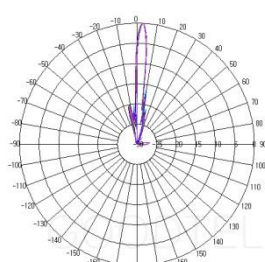
X POL  
1700~2200MHz



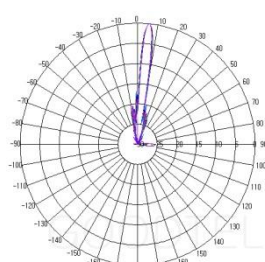
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration



# Product Specifications Sheet X series for BTS

XHA90-16.5T0/2/6

1710~2170MHz  
Broad Band Dual Polarization  
90° Horizontal Beam Width, Fixed Tilt



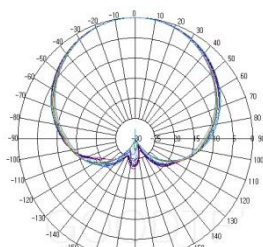
## Electrical Specifications

| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 16.2dBi      | 16.4dBi      | 16.6dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 90°          | 88°          | 87°          |
|                                | Vertical   | 6.7°         | 6.1°         | 5.7°         |
| Electrical Tilt                |            |              | 0°, 2°, 6°   |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 25dB         |              |
| Isolation between Ports        |            |              | 30dB         |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |              | -150dBc      |              |
| Maximum Input Power            |            |              | 300W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              | 0°         |              | -            |              |
|                                | ±60°       |              | -            |              |
| Tracking                       |            |              | 2dB          |              |
| Squint                         |            |              | ±2.5°        |              |

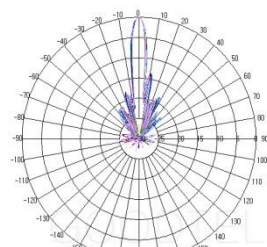
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 158/1348/78mm                |
| Weight               |       | 4.5Kg                        |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

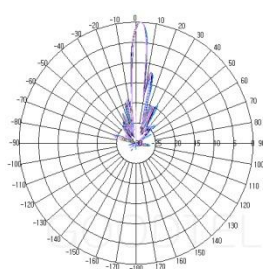
X POL  
1700~2200MHz



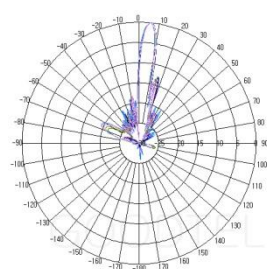
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration

# Product Specifications Sheet X series for BTS

XHA33-21V10

1710~2170MHz

Broad Band Dual Polarization

33° Horizontal Beam Width, Variable Tilt

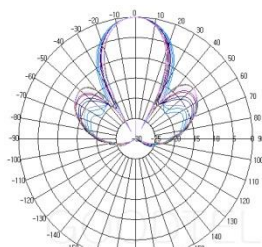


## Electrical Specifications

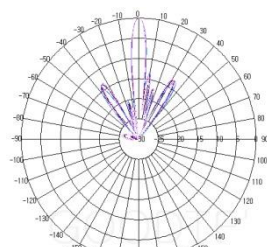
| Frequency Band                 |            | 1710~<br>1880MHz | 1850~<br>1990MHz | 1920~<br>2170MHz |
|--------------------------------|------------|------------------|------------------|------------------|
| Gain                           |            | 20.1dBi          | 20.4dBi          | 20.7dBi          |
| Polarization                   |            | ±45°             |                  |                  |
| Half Power Beam width          | Horizontal | 34°              | 32°              | 30°              |
|                                | Vertical   | 6.7°             | 6.1°             | 5.7°             |
| Electrical Tilt                |            |                  | 0°~ 10°          |                  |
| Upper 1st Sidelobe Suppression |            |                  | 15dB             |                  |
| Front-to-Back Ratio            |            |                  | 25dB             |                  |
| Isolation between Ports        |            |                  | 30dB             |                  |
| VSWR                           |            |                  | 1.5:1            |                  |
| Intermodulation IM3            | 2 x 43dBm  |                  | -150dBc          |                  |
| Maximum Input Power            |            |                  | 300W             |                  |
| Impedance                      |            |                  | 50Ω              |                  |
| Cross Polar Ratio              | 0°         |                  | -                |                  |
|                                | ±60°       |                  | -                |                  |
| Tracking                       |            |                  | 2dB              |                  |
| Squint                         |            |                  | ±2.5°            |                  |

## Mechanical Specifications

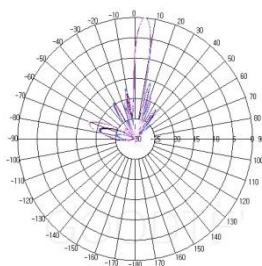
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1348/115mm               |
| Weight               |       | 5.5Kg                        |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



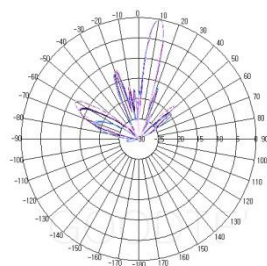
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

X POL  
1700~2200MHz

# Product Specifications Sheet X series for BTS

XHA33-24V6

1710~2170MHz

Broad Band Dual Polarization

33° Horizontal Beam Width, Variable Tilt

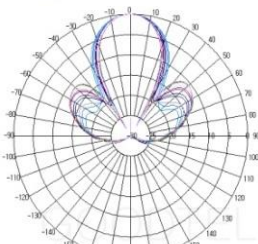


## Electrical Specifications

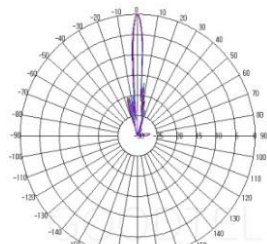
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 22.8dBi      | 23.5dBi      | 23.3dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 34°          | 32°          | 30°          |
|                                | Vertical   | 3.7°         | 3.5°         | 3.3°         |
| Electrical Tilt                |            |              | 0°~ 6°       |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 25dB         |              |
| Isolation between Ports        |            |              | 30dB         |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |              | -150dBc      |              |
| Maximum Input Power            |            |              | 300W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              | 0°         | -            |              |              |
|                                | ±60°       | -            |              |              |
| Tracking                       |            |              | 2dB          |              |
| Squint                         |            |              | ±2.5°        |              |

## Mechanical Specifications

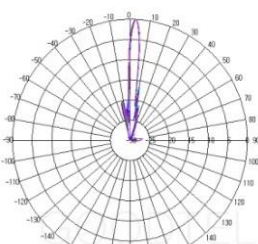
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2350/115mm               |
| Weight               |       | 12Kg                         |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |



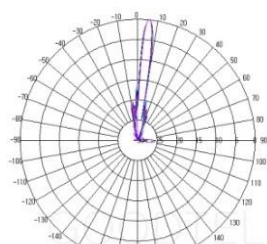
Horizontal



Vertical 0T



Vertical 3T



Vertical 6T



Install Configuration

X POL  
1700~2200MHz

# Product Specifications Sheet X series for BTS

**XHA45-19V10**

**1710~2170MHz**

**Broad Band Dual Polarization**

**45° Horizontal Beam Width, Variable Tilt**

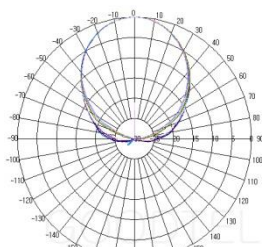


## Electrical Specifications

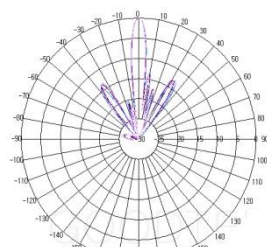
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 18.8dBi      | 19.1dBi      | 19.4dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 45°          |              |              |
|                                | Vertical   | 6.7°         | 6.1°         | 5.7°         |
| Electrical Tilt                |            |              | 0°~ 10°      |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 25dB         |              |
| Isolation between Ports        |            |              | 30dB         |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |              | -150dBc      |              |
| Maximum Input Power            |            |              | 300W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              | 0°         | -            |              |              |
|                                | ±60°       | -            |              |              |
| Tracking                       |            |              | -            |              |
| Squint                         |            |              | -            |              |

## Mechanical Specifications

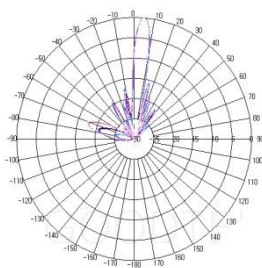
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1348/115mm               |
| Weight               |       | 5Kg                          |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



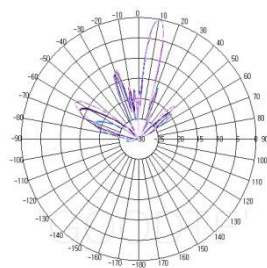
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

X POL  
1700~2200MHz

# Product Specifications Sheet X series for BTS

**XHA65-15.5V14**

**1710~2170MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Variable Tilt**



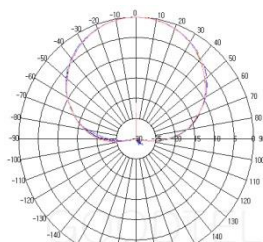
## Electrical Specifications

|                                |            |              |              |              |
|--------------------------------|------------|--------------|--------------|--------------|
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
| Gain                           |            | 15dBi        | 15.3dBi      | 15.6dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 14.5°        | 13.5°        | 12.5°        |
| Electrical Tilt                |            | 0°~ 14°      |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 25dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            | 300W         |              |              |
| Impedance                      |            | 50Ω          |              |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |              |
|                                | ±60°       | 10dB         | 10dB         | 8dB          |
| Tracking                       |            | 2dB          |              |              |
| Squint                         |            | ±2.5°        |              |              |

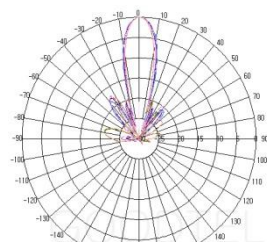
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 158/695/78mm                 |
| Weight               |       | 3.5Kg                        |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 30°                     |

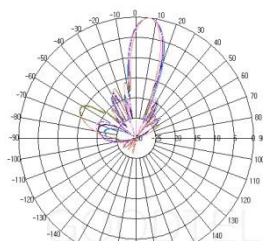
X POL  
1700~2200MHz



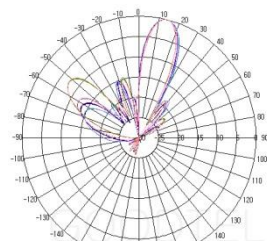
Horizontal



Vertical 0T



Vertical 7T



Vertical 14T



Install Configuration



# Product Specifications Sheet X series for BTS

**XHA65-16.5V10**

**1710~2170MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Variable Tilt**



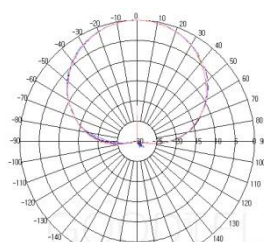
## Electrical Specifications

| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 16.3dBi      | 16.6dBi      | 16.9dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 9.5°         | 9°           | 8.5°         |
| Electrical Tilt                |            | 0°~ 10°      |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 25dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            |            | 2 x 43dBm    |              |              |
| Maximum Input Power            |            | -150dBc      |              |              |
| Impedance                      |            | 300W         |              |              |
| Cross Polar Ratio              |            | 50Ω          |              |              |
|                                |            | 20dB         |              |              |
|                                |            | 0°           | 10dB         | 10dB         |
|                                |            | ±60°         | 10dB         | 8dB          |
| Tracking                       |            | 2dB          |              |              |
| Squint                         |            | ±2.5°        |              |              |

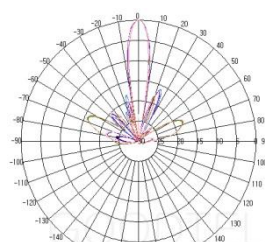
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 158/1090/78mm                |
| Weight               |       | 4.5Kg                        |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 30°                     |

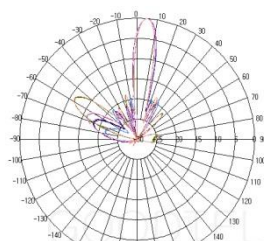
X POL  
1700~2200MHz



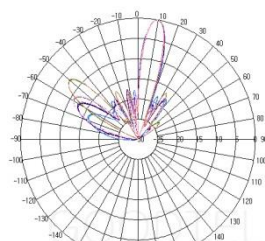
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration



# Product Specifications Sheet X series for BTS

**XHA65-18V10**

**1710~2170MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Variable Tilt**



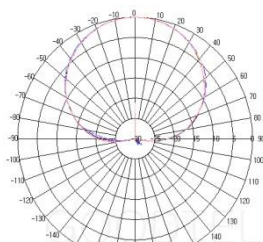
## Electrical Specifications

|                                |            |              |              |              |
|--------------------------------|------------|--------------|--------------|--------------|
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
| Gain                           |            | 17.5dBi      | 17.8dBi      | 18.1dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 7°           | 6.5°         | 6°           |
| Electrical Tilt                |            | 0°~ 10°      |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 25dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            | 300W         |              |              |
| Impedance                      |            | 50Ω          |              |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |              |
|                                | ±60°       | 10dB         | 10dB         | 8dB          |
| Tracking                       |            | 2dB          |              |              |
| Squint                         |            | ±2.5°        |              |              |

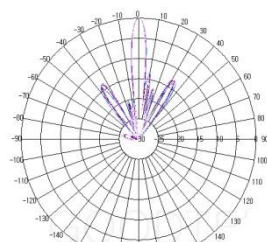
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 158/1370/78mm                |
| Weight               |       | 5.5Kg                        |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

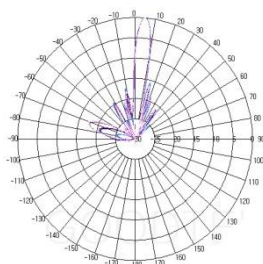
X POL  
1700~2200MHz



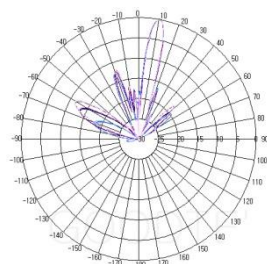
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

# Product Specifications Sheet X series for BTS

**XHA65-19V6**

**1710~2170MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Variable Tilt**



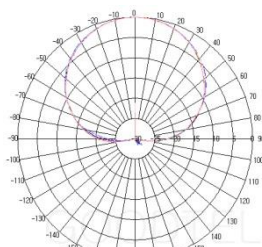
## Electrical Specifications

| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 18.5dBi      | 18.8dBi      | 19.1dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 4.7°         | 4.5°         | 4.3°         |
| Electrical Tilt                |            | 0°~ 6°       |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 25dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            |            | 2 x 43dBm    |              |              |
| Maximum Input Power            |            | -150dBc      |              |              |
| Impedance                      |            | 300W         |              |              |
| Cross Polar Ratio              |            | 50Ω          |              |              |
|                                |            | 20dB         |              |              |
|                                |            | 0°           | 10dB         | 10dB         |
|                                |            | ±60°         | 10dB         | 8dB          |
| Tracking                       |            | 2dB          |              |              |
| Squint                         |            | ±2.5°        |              |              |

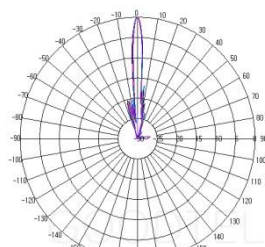
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 158/1950/78mm                |
| Weight               |       | 7Kg                          |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

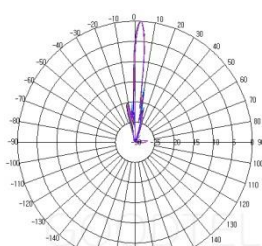
X POL  
1700~2200MHz



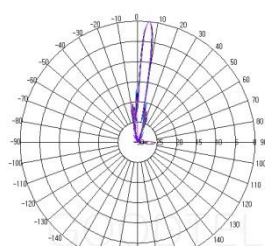
Horizontal



Vertical 0T



Vertical 3T



Vertical 6T



Install Configuration

# Product Specifications Sheet X series for BTS

XHA65-21V6

1710~2170MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Variable Tilt

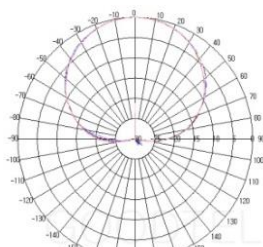


## Electrical Specifications

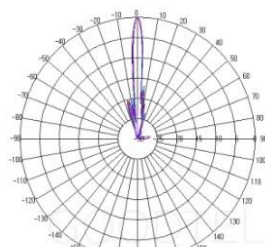
|                                |            |              |              |              |
|--------------------------------|------------|--------------|--------------|--------------|
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
| Gain                           |            | 20.1dBi      | 20.7dBi      | 20.4dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 3.7°         | 3.5°         | 3.3°         |
| Electrical Tilt                |            | 0°~ 6°       |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 25dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            | 300W         |              |              |
| Impedance                      |            | 50Ω          |              |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |              |
|                                | ±60°       | 10dB         | 10dB         | 9dB          |
| Tracking                       |            | 2dB          |              |              |
| Squint                         |            | ±2.5°        |              |              |

## Mechanical Specifications

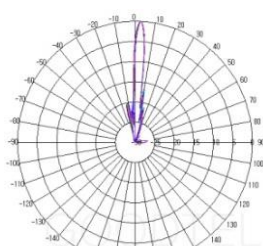
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 158/2350/78mm                |
| Weight               |       | 8Kg                          |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |



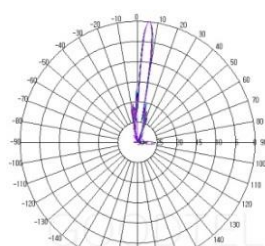
Horizontal



Vertical 0T



Vertical 3T



Vertical 6T



Install Configuration

X POL  
1700~2200MHz

# Product Specifications Sheet X series for BTS

XHA65-16.5V8S

1710~2170MHz

Broad Band Dual Polarization

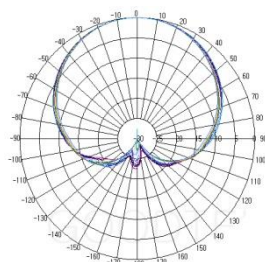
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

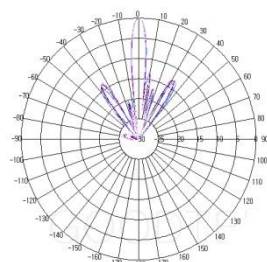
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 16.8dBi      | 17dBi        | 17.2dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 8°           | 7.5°         | 6.5°         |
| Electrical Tilt                |            | 0°~ 8°       |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 25dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            | 300W         |              |              |
| Impedance                      |            | 50Ω          |              |              |
| Cross Polar Ratio              | 0°         | -            |              |              |
|                                | ±60°       | -            |              |              |
| Tracking                       |            | 2dB          |              |              |
| Squint                         |            | ±2.5°        |              |              |

## Mechanical Specifications

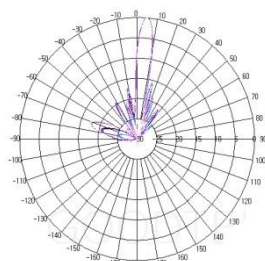
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 158/1348/78mm                |
| Weight               |       | 4.5Kg                        |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



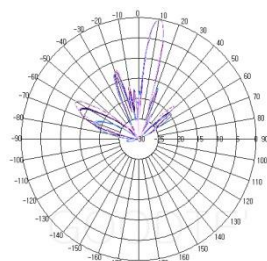
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

X POL  
1700~2200MHz

# Product Specifications Sheet XX series for BTS

XXHA65-18T0/2/6

1710~2170MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt

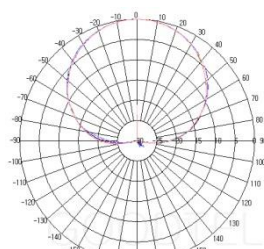


## Electrical Specifications

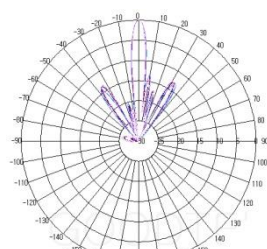
| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 17.5dBi      | 17.8dBi      | 18.1dBi      |
| Polarization                   |            | ±45°/ ±45°   |              |              |
| Half Power Beam width          | Horizontal | 67°          | 64°          | 61°          |
|                                | Vertical   | 6.7°         | 6.1°         | 5.7°         |
| Electrical Tilt                |            |              | 0°, 2°, 6°   |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 25dB         |              |
| Isolation between Ports        |            |              | 30dB         |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |              | -150dBc      |              |
| Maximum Input Power            |            |              | 300W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              | 0°         |              | 20dB         |              |
|                                | ±60°       | 10dB         | 10dB         | 8dB          |
| Tracking                       |            |              | 2dB          |              |
| Squint                         |            |              | -            |              |

## Mechanical Specifications

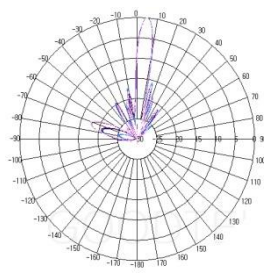
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1348/115mm               |
| Weight               |       | 8Kg                          |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



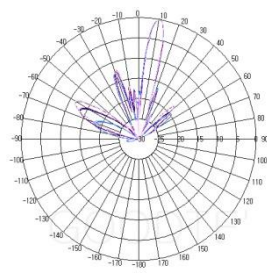
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

XX POL  
1700~2200MHz



# Product Specifications Sheet XX series for BTS

XXHA65-17.5V10

1710~2170MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Variable Tilt



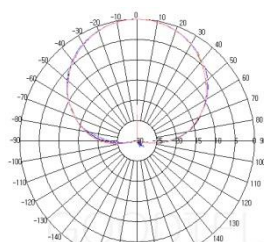
## Electrical Specifications

| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 17.5dBi      | 17.8dBi      | 18.1dBi      |
| Polarization                   |            | ±45°/ ±45°   |              |              |
| Half Power Beam width          | Horizontal | 67°          | 64°          | 61°          |
|                                | Vertical   | 6.7°         | 6.1°         | 5.7°         |
| Electrical Tilt                |            | 0°~ 10°      |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 25dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            | 300W         |              |              |
| Impedance                      |            | 50Ω          |              |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |              |
|                                | ±60°       | 10dB         | 10dB         | 8dB          |
| Tracking                       |            | 2dB          |              |              |
| Squint                         |            | -            |              |              |

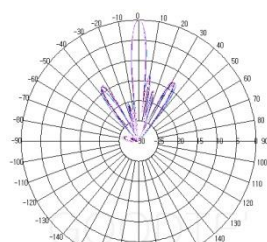
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1348/115mm               |
| Weight               |       | 8Kg                          |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

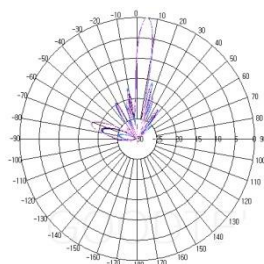
XX POL  
1700~2200MHz



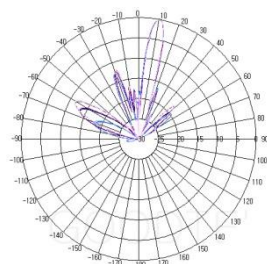
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

# Product Specifications Sheet XX series for BTS

XXHD65-17V10

2 x 1710~1880MHz

Dual Polarization

65° Horizontal Beam Width, Variable Tilt

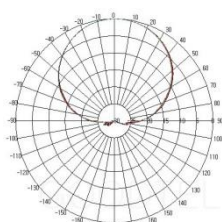


## Electrical Specifications

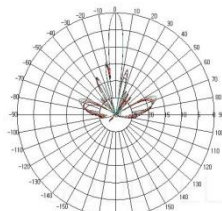
|                                |            |         |
|--------------------------------|------------|---------|
| Frequency Band(MHz)            | 1710~1880  |         |
| Gain                           | 17dBi      |         |
| Polarization                   | ±45°       |         |
| Half Power Beam width          | Horizontal | 65°     |
|                                | Vertical   | 7°      |
| Electrical Tilt                | 0°~ 10°    |         |
| Upper 1st Sidelobe Suppression | 15dB       |         |
| Front-to-Back Ratio            | 30dB       |         |
| Isolation between Ports        | 25dB       |         |
| VSWR                           | 1.5:1      |         |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc |
| Maximum Input Power            | 250W       |         |
| Impedance                      | 50Ω        |         |
| Cross Polar Ratio              | 20dB       |         |

## Mechanical Specifications

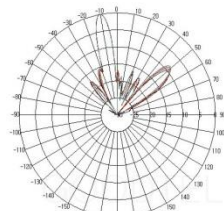
|                      |                              |                |
|----------------------|------------------------------|----------------|
| Dimension            | W/H/D                        | 265/1400/115mm |
| Weight               | 12Kg                         |                |
| Connector Type       | 4 x 7/16 DIN Female & Bottom |                |
| Adjustment wheel     | 1EA                          |                |
| Rated Wind Velocity  | 60m/s                        |                |
| Radome Material      | ASA + Glass 20% (prevent UV) |                |
| Mechanical Down Tilt | 0°~ 20°                      |                |



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

XX POL  
1700~1900MHz

# Product Specifications Sheet XX series for BTS

XXHD65-18.5V10

2 x 1710~1880MHz

Dual Polarization

65° Horizontal Beam Width, Variable Tilt

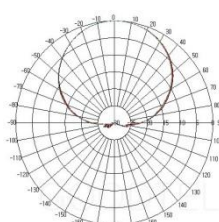


## Electrical Specifications

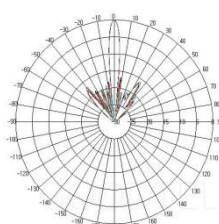
|                                |            |         |
|--------------------------------|------------|---------|
| Frequency Band(MHz)            | 1710~1880  |         |
| Gain                           | 18.5dBi    |         |
| Polarization                   | ±45°       |         |
| Half Power Beam width          | Horizontal | 65°     |
|                                | Vertical   | 5.3°    |
| Electrical Tilt                | 0°~ 8°     |         |
| Upper 1st Sidelobe Suppression | 15dB       |         |
| Front-to-Back Ratio            | 25dB       |         |
| Isolation between Ports        | 25dB       |         |
| VSWR                           | 1.5:1      |         |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc |
| Maximum Input Power            | 250W       |         |
| Impedance                      | 50Ω        |         |
| Cross Polar Ratio              | 20dB       |         |

## Mechanical Specifications

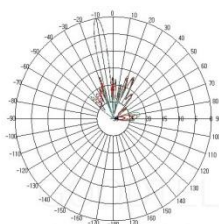
|                      |                              |                |
|----------------------|------------------------------|----------------|
| Dimension            | W/H/D                        | 265/1815/115mm |
| Weight               | 15Kg                         |                |
| Connector Type       | 4 x 7/16 DIN Female & Bottom |                |
| Adjustment wheel     | 1EA                          |                |
| Rated Wind Velocity  | 60m/s                        |                |
| Radome Material      | ASA + Glass 20% (prevent UV) |                |
| Mechanical Down Tilt | 0°~ 15°                      |                |



Horizontal



Vertical 0T



Vertical 10T

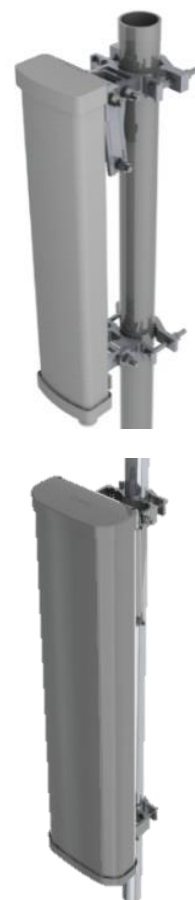


Install Configuration

XX POL  
1700~1900MHz

## Index X-POL 2300~2700MHz

| 2300MHz ~ 2700MHz |                       |      |             |           |                    |                |      |
|-------------------|-----------------------|------|-------------|-----------|--------------------|----------------|------|
| Type              | Frequency Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model          | Page |
| X-POL             | 2300~2690             | 2    | 65          | 18        | 0,2,6              | XHI65-18T*     | 57   |
|                   |                       | 2    | 65          | 18        | 0,4,8              | XHI65-18T*S    | 58   |
|                   |                       | 2    | 65          | 19.5      | 0,4,8              | XHI65-19.5T*S  | 59   |
|                   |                       | 2    | 65          | 21        | 0,4,8              | XHI65-21T*S    | 60   |
|                   |                       | 2    | 65          | 17.5      | 0~10               | XHI65-17.5V10  | 61   |
|                   |                       | 2    | 65          | 18        | 0~10               | XHI65-18V10S   | 62   |
|                   |                       | 2    | 65          | 19.5      | 0~6                | XHI65-19.5V6S  | 63   |
|                   |                       | 2    | 65          | 21        | 0~6                | XHI65-21V6S    | 64   |
| XX-POL            | 2300~2690             | 4    | 65          | 18        | 0,2,6              | XXHI65-18T*    | 65   |
|                   |                       | 4    | 65          | 18        | 0,4,8              | XXHI65-18T*    | 66   |
|                   |                       | 4    | 65          | 19.5      | 0,4,8              | XXHI65-19.5T*  | 67   |
|                   |                       | 4    | 65          | 21        | 0,4,8              | XXHI65-21T*    | 68   |
|                   |                       | 4    | 65          | 17.5      | 0~10               | XXHI65-17.5V10 | 69   |
|                   |                       | 4    | 65          | 19.5      | 0~6                | XXHI65-19.5V6  | 70   |
|                   |                       | 4    | 65          | 21        | 0~6                | XXHI65-21V6    | 71   |
|                   | 2300~2400             | 4    | 33          | 20        | 0~10               | XXHE33-20V10   | 72   |
|                   |                       | 4    | 65          | 14.5      | 0~10               | XXHE65-14.5V10 | 73   |
|                   |                       | 4    | 65          | 17        | 0~10               | XXHE65-17V10   | 74   |
|                   |                       | 4    | 65          | 18.5      | 0~10               | XXHE65-18.5V10 | 75   |



# Product Specifications Sheet X series for BTS

XHI65-18T0/2/6

2300~2690MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt



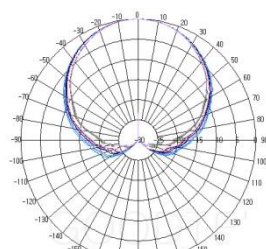
## Electrical Specifications

| Frequency Band                 |            | 2300~2390MHz | 2400~2485MHz | 2490~2700MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 17.5dBi      | 17.8dBi      | 18.1dBi      |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 67°          | 65°          | 63°          |
|                                | Vertical   | 6.7°         | 6.1°         | 5.7°         |
| Electrical Tilt                |            | 0°, 2°, 6°   |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 25dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            | 300W         |              |              |
| Impedance                      |            | 50Ω          |              |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |              |
|                                | ±60°       | 10dB         | 10dB         | 8dB          |
| Tracking                       |            | 2dB          |              |              |
| Squint                         |            | +2.5°        |              |              |

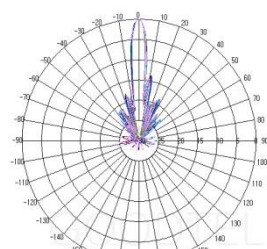
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 120/1100/60mm                |
| Weight               |       | 3Kg                          |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

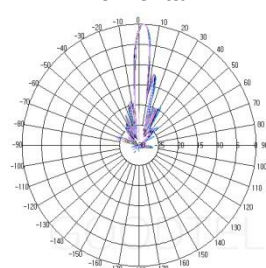
X POL  
2300~2700MHz



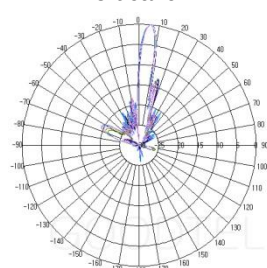
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration



# Product Specifications Sheet X series for BTS

XHI65-18T0/4/8S

2300~2690MHz

Broad Band Dual Polarization

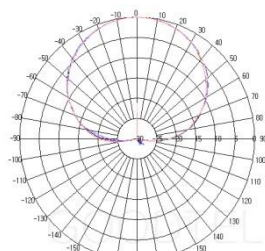
65° Horizontal Beam Width, Fixed Tilt

## Electrical Specifications

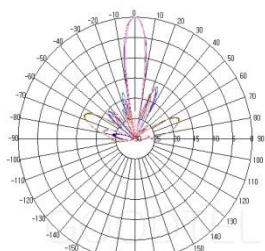
|                                |            |              |              |
|--------------------------------|------------|--------------|--------------|
| Frequency Band                 |            | 2300~2500MHz | 2500~2690MHz |
| Gain                           |            | 17.5dBi      | 18dBi        |
| Polarization                   |            | ±45°         |              |
| Half Power Beam width          | Horizontal | 65°          | 65°          |
|                                | Vertical   | 7°           | 6.5°         |
| Electrical Tilt                |            | 0°, 4°, 8°   |              |
| Upper 1st Sidelobe Suppression |            | 18dB         |              |
| Front-to-Back Ratio            |            | 25dB         |              |
| Isolation between Ports        |            | 30dB         |              |
| VSWR                           |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |
| Maximum Input Power            |            | 300W         |              |
| Impedance                      |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |
|                                | ±60°       | 8dB          | 8dB          |
| Tracking                       |            | 2dB          |              |
| Squint                         |            | ±2.5°        |              |

## Mechanical Specifications

|                          |     |                              |
|--------------------------|-----|------------------------------|
| Dimension                | Ø/H | 125/1150mm                   |
| Weight (exclude bracket) |     | 4Kg                          |
| Connector Type           |     | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |     | 60m/s                        |
| Radome Material          |     | ASA (prevent UV)             |
| Mechanical Down Tilt     |     | 0° ~ 20°                     |



Horizontal



Vertical 0T



Install Configuration

X POL  
2300~2700MHz

# Product Specifications Sheet X series for BTS

XHI65-19.5T0/4/8S

2300~2690MHz

Broad Band Dual Polarization

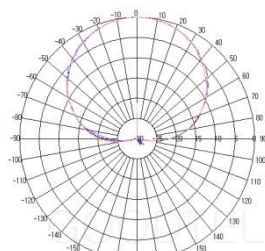
65° Horizontal Beam Width, Fixed Tilt

## Electrical Specifications

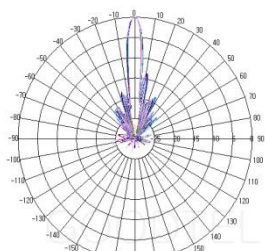
|                                |            |              |              |
|--------------------------------|------------|--------------|--------------|
| Frequency Band                 |            | 2300~2500MHz | 2500~2690MHz |
| Gain                           |            | 19dBi        | 19.5dBi      |
| Polarization                   |            | ±45°         |              |
| Half Power Beam width          | Horizontal | 65°          | 65°          |
|                                | Vertical   | 4.5°         | 4.3°         |
| Electrical Tilt                |            | 0°, 4°, 8°   |              |
| Upper 1st Sidelobe Suppression |            | 18dB         |              |
| Front-to-Back Ratio            |            | 25dB         |              |
| Isolation between Ports        |            | 30dB         |              |
| VSWR                           |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |
| Maximum Input Power            |            | 300W         |              |
| Impedance                      |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |
|                                | ±60°       | 8dB          | 8dB          |
| Tracking                       |            | 2dB          |              |
| Squint                         |            | ±2.5°        |              |

## Mechanical Specifications

|                          |     |                              |
|--------------------------|-----|------------------------------|
| Dimension                | Ø/H | 125/1620mm                   |
| Weight (exclude bracket) |     | 5.5Kg                        |
| Connector Type           |     | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |     | 60m/s                        |
| Radome Material          |     | ASA (prevent UV)             |
| Mechanical Down Tilt     |     | 0° ~ 10°                     |



Horizontal



Vertical 0T



Install Configuration

X POL  
2300~2700MHz

# Product Specifications Sheet X series for BTS

XHI65-21T0/4/8S

2300~2690MHz

Broad Band Dual Polarization

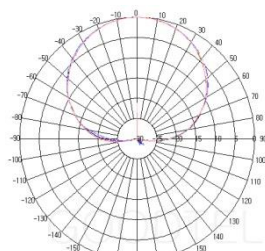
65° Horizontal Beam Width, Fixed Tilt

## Electrical Specifications

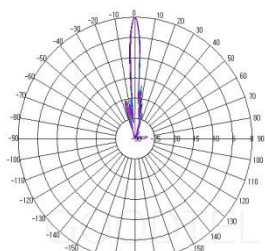
|                                |            |              |              |
|--------------------------------|------------|--------------|--------------|
| Frequency Band                 |            | 2300~2500MHz | 2500~2690MHz |
| Gain                           |            | 20.5dBi      | 21dBi        |
| Polarization                   |            | ±45°         |              |
| Half Power Beam width          | Horizontal | 65°          | 65°          |
|                                | Vertical   | 3.2°         | 3°           |
| Electrical Tilt                |            | 0°, 4°, 8°   |              |
| Upper 1st Sidelobe Suppression |            | 18dB         |              |
| Front-to-Back Ratio            |            | 25dB         |              |
| Isolation between Ports        |            | 30dB         |              |
| VSWR                           |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |
| Maximum Input Power            |            | 300W         |              |
| Impedance                      |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |
|                                | ±60°       | 8dB          | 8dB          |
| Tracking                       |            | 2dB          |              |
| Squint                         |            | ±2.5°        |              |

## Mechanical Specifications

|                          |     |                              |
|--------------------------|-----|------------------------------|
| Dimension                | Ø/H | 125/2160mm                   |
| Weight (exclude bracket) |     | 7Kg                          |
| Connector Type           |     | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |     | 60m/s                        |
| Radome Material          |     | ASA (prevent UV)             |
| Mechanical Down Tilt     |     | 0° ~ 10°                     |



Horizontal



Vertical 0T



Install Configuration

X POL  
2300~2700MHz

# Product Specifications Sheet X series for BTS

XHI65-17.5V10

2300~2690MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Variable Tilt

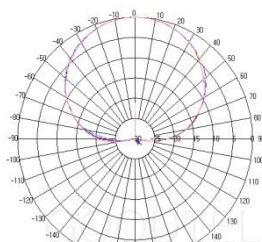


## Electrical Specifications

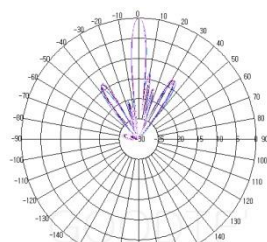
| Frequency Band                 |            | 2300~<br>2390MHz | 2400~<br>2485MHz | 2490~<br>2690MHz |
|--------------------------------|------------|------------------|------------------|------------------|
| Gain                           |            | 17.5dBi          | 17.8dBi          | 18.1dBi          |
| Polarization                   |            | ±45°             |                  |                  |
| Half Power Beam width          | Horizontal | 67°              | 65°              | 63°              |
|                                | Vertical   | 7°               | 6.5°             | 6°               |
| Electrical Tilt                |            |                  | 0°~ 10°          |                  |
| Upper 1st Sidelobe Suppression |            |                  | 15dB             |                  |
| Front-to-Back Ratio            |            |                  | 25dB             |                  |
| Isolation between Ports        |            |                  | 30dB             |                  |
| VSWR                           |            |                  | 1.5:1            |                  |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc          |                  |                  |
| Maximum Input Power            |            | 300W             |                  |                  |
| Impedance                      |            | 50Ω              |                  |                  |
| Cross Polar Ratio              | 0°         | 20dB             |                  |                  |
|                                | ±60°       | 10dB             | 10dB             | 8dB              |
| Tracking                       |            |                  | 2dB              |                  |
| Squint                         |            |                  | ±2.5°            |                  |

## Mechanical Specifications

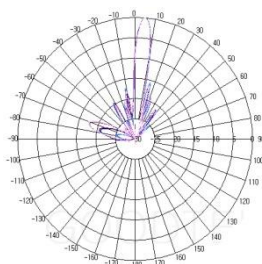
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 158/1100/78mm                |
| Weight               |       | 5Kg                          |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



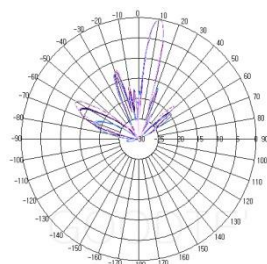
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

X POL  
2300~2700MHz

# Product Specifications Sheet X series for BTS

XHI65-18V10S

2300~2690MHz

Broad Band Dual Polarization

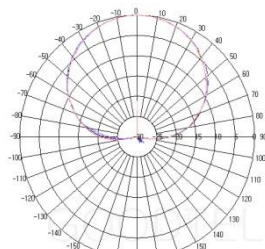
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

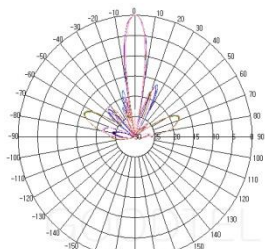
|                                |                |                 |              |
|--------------------------------|----------------|-----------------|--------------|
| Frequency Band                 |                | 2300~2500MHz    | 2500~2690MHz |
| Gain                           |                | 17.5dBi         | 18dBi        |
| Polarization                   |                | $\pm 45^\circ$  |              |
| Half Power Beam width          | Horizontal     | 65°             | 65°          |
|                                | Vertical       | 7°              | 6.5°         |
| Electrical Tilt                |                | 0° ~ 10°        |              |
| Upper 1st Sidelobe Suppression |                | 18dB            |              |
| Front-to-Back Ratio            |                | 25dB            |              |
| Isolation between Ports        |                | 30dB            |              |
| VSWR                           |                | 1.5:1           |              |
| Intermodulation IM3            | 2 x 43dBm      | -150dBc         |              |
| Maximum Input Power            |                | 300W            |              |
| Impedance                      |                | 50Ω             |              |
| Cross Polar Ratio              | 0°             | 20dB            |              |
|                                | $\pm 60^\circ$ | 8dB             | 8dB          |
| Tracking                       |                | 2dB             |              |
| Squint                         |                | $\pm 2.5^\circ$ |              |

## Mechanical Specifications

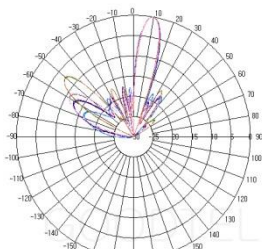
|                          |     |                              |
|--------------------------|-----|------------------------------|
| Dimension                | Ø/H | 125/1150mm                   |
| Weight (exclude bracket) |     | 4Kg                          |
| Connector Type           |     | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |     | 60m/s                        |
| Radome Material          |     | ASA (prevent UV)             |
| Mechanical Down Tilt     |     | 0° ~ 20°                     |



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

X POL  
2300~2700MHz



# Product Specifications Sheet X series for BTS

XHI65-19.5V6S

2300~2690MHz

Broad Band Dual Polarization

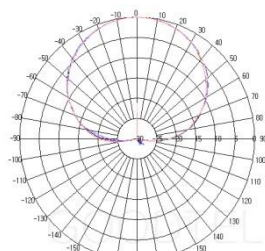
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

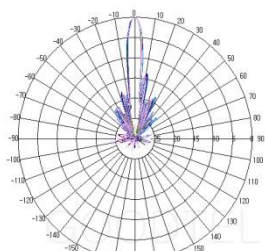
|                                |                |                 |              |
|--------------------------------|----------------|-----------------|--------------|
| Frequency Band                 |                | 2300~2500MHz    | 2500~2690MHz |
| Gain                           |                | 19dBi           | 19.5dBi      |
| Polarization                   |                | $\pm 45^\circ$  |              |
| Half Power Beam width          | Horizontal     | 65°             | 65°          |
|                                | Vertical       | 4.5°            | 4.3°         |
| Electrical Tilt                |                | 0° ~ 6°         |              |
| Upper 1st Sidelobe Suppression |                | 18dB            |              |
| Front-to-Back Ratio            |                | 25dB            |              |
| Isolation between Ports        |                | 30dB            |              |
| VSWR                           |                | 1.5:1           |              |
| Intermodulation IM3            | 2 x 43dBm      | -150dBc         |              |
| Maximum Input Power            |                | 300W            |              |
| Impedance                      |                | 50Ω             |              |
| Cross Polar Ratio              | 0°             | 20dB            |              |
|                                | $\pm 60^\circ$ | 8dB             | 8dB          |
| Tracking                       |                | 2dB             |              |
| Squint                         |                | $\pm 2.5^\circ$ |              |

## Mechanical Specifications

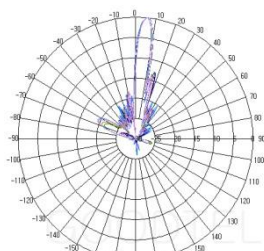
|                          |     |                              |
|--------------------------|-----|------------------------------|
| Dimension                | Ø/H | 125/1620mm                   |
| Weight (exclude bracket) |     | 5.5Kg                        |
| Connector Type           |     | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |     | 60m/s                        |
| Radome Material          |     | ASA (prevent UV)             |
| Mechanical Down Tilt     |     | 0° ~ 10°                     |



Horizontal



Vertical 0T



Vertical 6T



Install Configuration

X POL  
2300~2700MHz

# Product Specifications Sheet X series for BTS

XHI65-21V6S

2300~2690MHz

Broad Band Dual Polarization

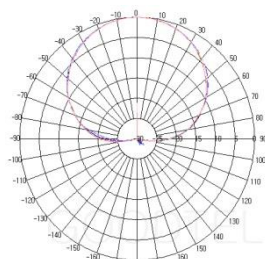
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

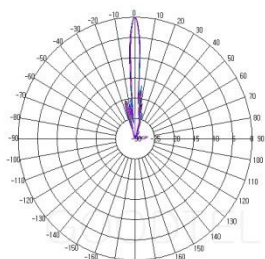
| Frequency Band                 |            | 2300~<br>2500MHz | 2500~<br>2690MHz |
|--------------------------------|------------|------------------|------------------|
| Gain                           |            | 20.5dBi          | 21dBi            |
| Polarization                   |            | ±45°             |                  |
| Half Power Beam width          | Horizontal | 65°              | 65°              |
|                                | Vertical   | 3.2°             | 3°               |
| Electrical Tilt                |            | 0°~ 6°           |                  |
| Upper 1st Sidelobe Suppression |            | 18dB             |                  |
| Front-to-Back Ratio            |            | 25dB             |                  |
| Isolation between Ports        |            | 30dB             |                  |
| VSWR                           |            | 1.5:1            |                  |
| Intermodulation IM3            |            | 2 x 43dBm        | -150dBc          |
| Maximum Input Power            |            | 300W             |                  |
| Impedance                      |            | 50Ω              |                  |
| Cross Polar Ratio              | 0°         | 20dB             |                  |
|                                | ±60°       | 8dB              | 8dB              |
| Tracking                       |            | 2dB              |                  |
| Squint                         |            | ±2.5°            |                  |

## Mechanical Specifications

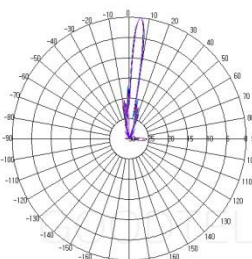
|                          |     |                              |
|--------------------------|-----|------------------------------|
| Dimension                | Ø/H | 125/2160mm                   |
| Weight (exclude bracket) |     | 7Kg                          |
| Connector Type           |     | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |     | 60m/s                        |
| Radome Material          |     | ASA (prevent UV)             |
| Mechanical Down Tilt     |     | 0° ~ 10°                     |



Horizontal



Vertical 0T



Vertical 6T



Install Configuration

X POL  
2300~2700MHz

# Product Specifications Sheet XX series for BTS

XXHI65-18T0/2/6

2300~2690MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Fixed Tilt



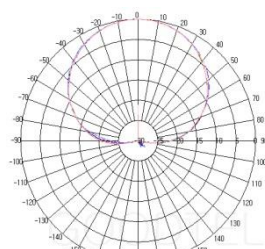
## Electrical Specifications

| Frequency Band                 |            | 2300~<br>2390MHz | 2400~<br>2485MHz | 2490~<br>2690MHz |
|--------------------------------|------------|------------------|------------------|------------------|
| Gain                           |            | 17.5dBi          | 17.8dBi          | 18.1dBi          |
| Polarization                   |            | ±45°/ ±45°       |                  |                  |
| Half Power Beam width          | Horizontal | 67°              | 64°              | 61°              |
|                                | Vertical   | 6.7°             | 6.1°             | 5.7°             |
| Electrical Tilt                |            |                  | 0°, 2°, 6°       |                  |
| Upper 1st Sidelobe Suppression |            |                  | 15dB             |                  |
| Front-to-Back Ratio            |            |                  | 25dB             |                  |
| Isolation between Ports        |            |                  | 30dB             |                  |
| VSWR                           |            |                  | 1.5:1            |                  |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc          |                  |                  |
| Maximum Input Power            |            |                  | 300W             |                  |
| Impedance                      |            |                  | 50Ω              |                  |
| Cross Polar Ratio              | 0°         | 20dB             |                  |                  |
|                                | ±60°       | 10dB             | 10dB             | 8dB              |
| Tracking                       |            |                  | 2dB              |                  |
| Squint                         |            |                  | -                |                  |

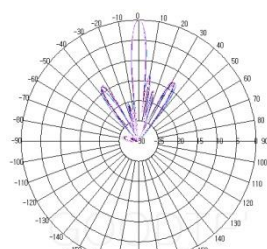
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1100/115mm               |
| Weight               |       | 7Kg                          |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

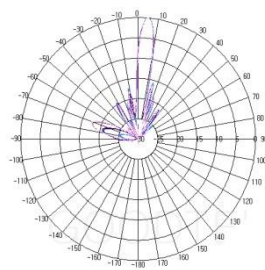
XX POL  
2300~2700MHz



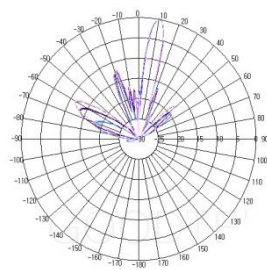
Horizontal



Vertical 0T



Vertical 2T



Vertical 6T



Install Configuration

# Product Specifications Sheet XX series for BTS

XXHI65-18T0/4/8

2300~2690MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Fixed Tilt

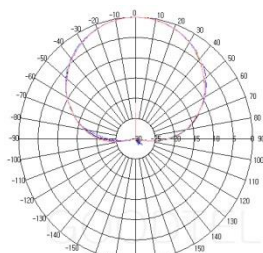
## Electrical Specifications

| Frequency Band                 |            | 2300~2500MHz | 2500~2690MHz |
|--------------------------------|------------|--------------|--------------|
| Gain                           |            | 17.5dBi      | 18dBi        |
| Polarization                   |            | ±45°         |              |
| Half Power Beam width          | Horizontal | 65°          | 65°          |
|                                | Vertical   | 7°           | 6.5°         |
| Electrical Tilt                |            | 0°/4°/8°     |              |
| Upper 1st Sidelobe Suppression |            | 18dB         |              |
| Front-to-Back Ratio            |            | 25dB         |              |
| Isolation between Ports        |            | 30dB         |              |
| VSWR                           |            | 1.5:1        |              |
| Intermodulation IM3            |            | 2 x 43dBm    | -150dBc      |
| Maximum Input Power            |            | 300W         |              |
| Impedance                      |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |
|                                | ±60°       | 8dB          | 8dB          |
| Tracking                       |            | 2dB          |              |
| Squint                         |            | ±2.5°        |              |

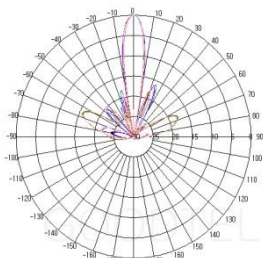
## Mechanical Specifications

|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/D/H | 265/115/1150mm               |
| Weight (exclude bracket) |       | 8Kg                          |
| Connector Type           |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 20°                     |

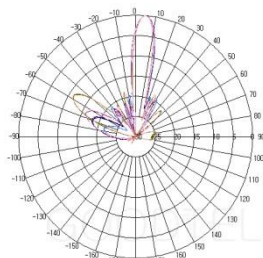
XX POL  
2300~2700MHz



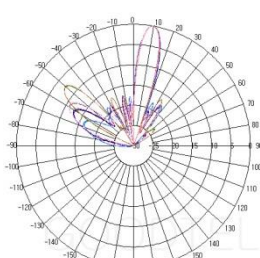
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

# Product Specifications Sheet XX series for BTS

XXHI65-19.5T0/4/8

2300~2690MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Fixed Tilt

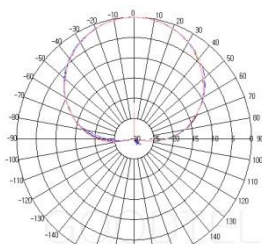
## Electrical Specifications

| Frequency Band                 |            | 2300~2500MHz | 2500~2690MHz |
|--------------------------------|------------|--------------|--------------|
| Gain                           |            | 19dBi        | 19.5dBi      |
| Polarization                   |            | ±45°         |              |
| Half Power Beam width          | Horizontal | 65°          | 65°          |
|                                | Vertical   | 4.5°         | 4.3°         |
| Electrical Tilt                |            | 0°/4°/8°     |              |
| Upper 1st Sidelobe Suppression |            | 18dB         |              |
| Front-to-Back Ratio            |            | 25dB         |              |
| Isolation between Ports        |            | 30dB         |              |
| VSWR                           |            | 1.5:1        |              |
| Intermodulation IM3            |            | 2 x 43dBm    | -150dBc      |
| Maximum Input Power            |            | 300W         |              |
| Impedance                      |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |
|                                | ±60°       | 8dB          | 8dB          |
| Tracking                       |            | 2dB          |              |
| Squint                         |            | ±2.5°        |              |

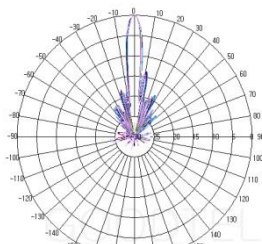
## Mechanical Specifications

|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/D/H | 265/115/1620mm               |
| Weight (exclude bracket) |       | 10Kg                         |
| Connector Type           |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 10°                     |

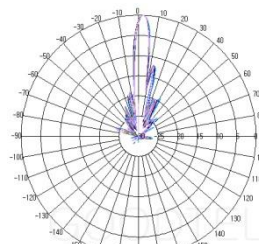
XX POL  
2300~2700MHz



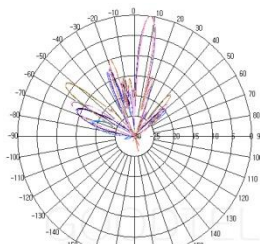
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration



# Product Specifications Sheet XX series for BTS

XXHI65-21T0/2/6

2300~2690MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Fixed Tilt

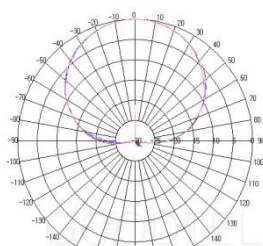
## Electrical Specifications

| Frequency Band                 |            | 2300~2500MHz | 2500~2690MHz |
|--------------------------------|------------|--------------|--------------|
| Gain                           |            | 20.5dBi      | 21dBi        |
| Polarization                   |            | ±45°         |              |
| Half Power Beam width          | Horizontal | 65°          | 65°          |
|                                | Vertical   | 3.2°         | 3°           |
| Electrical Tilt                |            | 0°/4°/8°     |              |
| Upper 1st Sidelobe Suppression |            | 18dB         |              |
| Front-to-Back Ratio            |            | 25dB         |              |
| Isolation between Ports        |            | 30dB         |              |
| VSWR                           |            | 1.5:1        |              |
| Intermodulation IM3            |            | 2 x 43dBm    | -150dBc      |
| Maximum Input Power            |            | 300W         |              |
| Impedance                      |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |
|                                | ±60°       | 8dB          | 8dB          |
| Tracking                       |            | 2dB          |              |
| Squint                         |            | ±2.5°        |              |

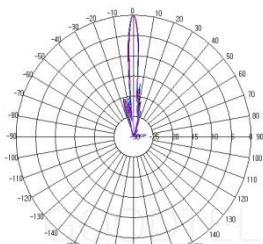
## Mechanical Specifications

|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/D/H | 265/115/2160mm               |
| Weight (exclude bracket) |       | 13Kg                         |
| Connector Type           |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 10°                     |

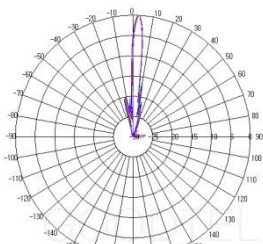
XX POL  
2300~2700MHz



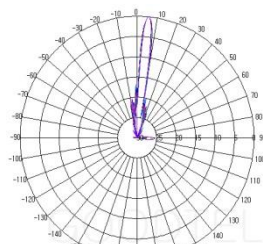
Horizontal



Vertical 0T



Vertical 4T



Vertical 8T



Install Configuration

# Product Specifications Sheet XX series for BTS

XXHI65-17.5V10

2300~2690MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Variable Tilt

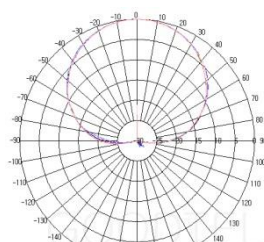


## Electrical Specifications

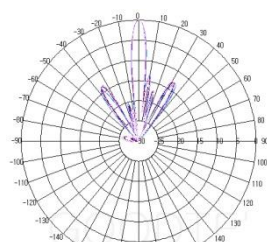
|                                |                |                               |              |              |
|--------------------------------|----------------|-------------------------------|--------------|--------------|
| Frequency Band                 |                | 2300~2390MHz                  | 2400~2485MHz | 2490~2690MHz |
| Gain                           |                | 17.5dBi                       | 17.8dBi      | 18.1dBi      |
| Polarization                   |                | $\pm 45^\circ / \pm 45^\circ$ |              |              |
| Half Power Beam width          | Horizontal     | 67°                           | 64°          | 61°          |
|                                | Vertical       | 6.7°                          | 6.1°         | 5.7°         |
| Electrical Tilt                |                | 0° ~ 10°                      |              |              |
| Upper 1st Sidelobe Suppression |                | 15dB                          |              |              |
| Front-to-Back Ratio            |                | 25dB                          |              |              |
| Isolation between Ports        |                | 30dB                          |              |              |
| VSWR                           |                | 1.5:1                         |              |              |
| Intermodulation IM3            | 2 x 43dBm      | -150dBc                       |              |              |
| Maximum Input Power            |                | 300W                          |              |              |
| Impedance                      |                | 50Ω                           |              |              |
| Cross Polar Ratio              | 0°             | 20dB                          |              |              |
|                                | $\pm 60^\circ$ | 10dB                          | 10dB         | 8dB          |
| Tracking                       |                | 2dB                           |              |              |
| Squint                         |                | $\pm 2.5^\circ$               |              |              |

## Mechanical Specifications

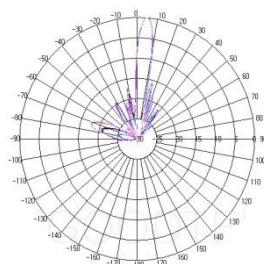
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1100/115mm               |
| Weight               |       | 8Kg                          |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |



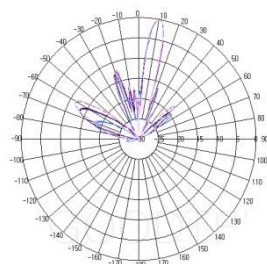
Horizontal



Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration

XX POL  
2300~2700MHz

# Product Specifications Sheet XX series for BTS

XXHI65-19.5V6

2300~2690MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Variable Tilt

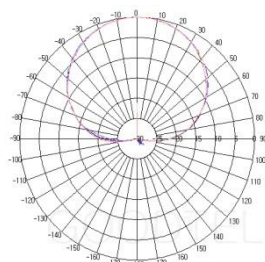


## Electrical Specifications

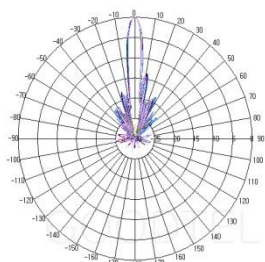
| Frequency Band                 |            | 2300~2500MHz | 2500~2690MHz |
|--------------------------------|------------|--------------|--------------|
| Gain                           |            | 19dBi        | 19.5dBi      |
| Polarization                   |            | ±45°         |              |
| Half Power Beam width          | Horizontal | 65°          | 65°          |
|                                | Vertical   | 4.5°         | 4.3°         |
| Electrical Tilt                |            | 0°~ 6°       |              |
| Upper 1st Sidelobe Suppression |            | 18dB         |              |
| Front-to-Back Ratio            |            | 25dB         |              |
| Isolation between Ports        |            | 30dB         |              |
| VSWR                           |            | 1.5:1        |              |
| Intermodulation IM3            |            | 2 x 43dBm    | -150dBc      |
| Maximum Input Power            |            | 300W         |              |
| Impedance                      |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |
|                                | ±60°       | 8dB          | 8dB          |
| Tracking                       |            | 2dB          |              |
| Squint                         |            | ±2.5°        |              |

## Mechanical Specifications

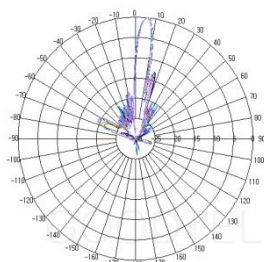
|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/D/H | 265/115/1620mm               |
| Weight (exclude bracket) |       | 10Kg                         |
| Connector Type           |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 10°                     |



Horizontal



Vertical 0T



Vertical 6T



Install Configuration

XX POL  
2300~2700MHz

# Product Specifications Sheet XX series for BTS

XXHI65-21V6

2300~2690MHz

Broad Band Dual Polarization

65° Horizontal Beam Width, Variable Tilt



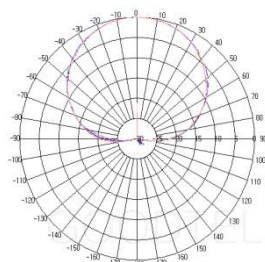
## Electrical Specifications

| Frequency Band                 |            | 2300~2500MHz | 2500~2690MHz |
|--------------------------------|------------|--------------|--------------|
| Gain                           |            | 20.5dBi      | 21dBi        |
| Polarization                   |            | ±45°         |              |
| Half Power Beam width          | Horizontal | 65°          | 65°          |
|                                | Vertical   | 3.2°         | 3°           |
| Electrical Tilt                |            | 0°~ 6°       |              |
| Upper 1st Sidelobe Suppression |            | 18dB         |              |
| Front-to-Back Ratio            |            | 25dB         |              |
| Isolation between Ports        |            | 30dB         |              |
| VSWR                           |            | 1.5:1        |              |
| Intermodulation IM3            |            | 2 x 43dBm    | -150dBc      |
| Maximum Input Power            |            | 300W         |              |
| Impedance                      |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |
|                                | ±60°       | 8dB          | 8dB          |
| Tracking                       |            | 2dB          |              |
| Squint                         |            | ±2.5°        |              |

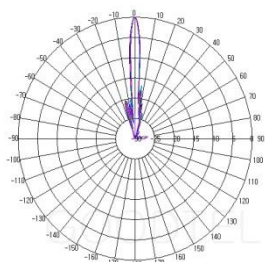
## Mechanical Specifications

|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/D/H | 265/115/2160mm               |
| Weight (exclude bracket) |       | 13Kg                         |
| Connector Type           |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 10°                     |

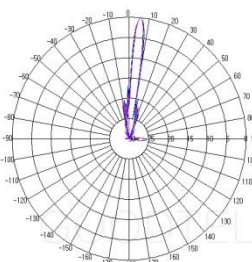
XX POL  
2300~2700MHz



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

# Product Specifications Sheet XX series for BTS

XXHE33-20V10

2 x 2300~2400MHz

Dual Polarization

65° Horizontal Beam Width, Variable Tilt



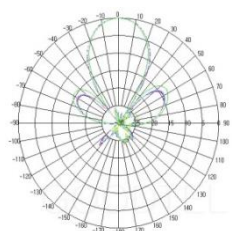
## Electrical Specifications

|                                |            |         |
|--------------------------------|------------|---------|
| Frequency Band(MHz)            | 2300~2400  |         |
| Gain                           | 20dBi      |         |
| Polarization                   | ±45°       |         |
| Half Power Beam width          | Horizontal | 32°     |
|                                | Vertical   | 5.6°    |
| Electrical Tilt                | 0°~ 10°    |         |
| Upper 1st Sidelobe Suppression | 15dB       |         |
| Front-to-Back Ratio            | 25dB       |         |
| Isolation between Ports        | 25dB       |         |
| VSWR                           | 1.5:1      |         |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc |
| Maximum Input Power            | 250W       |         |
| Impedance                      | 50Ω        |         |
| Cross Polar Ratio              | 20dB       |         |

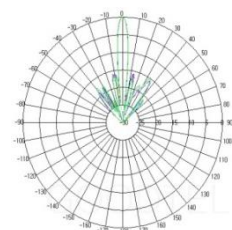
## Mechanical Specifications

|                      |                              |                 |
|----------------------|------------------------------|-----------------|
| Dimension            | W/H/D                        | 432//1400/125mm |
| Weight               | 20Kg                         |                 |
| Connector Type       | 4 x 7/16 DIN Female & Bottom |                 |
| Adjustment wheel     | 1EA                          |                 |
| Rated Wind Velocity  | 60m/s                        |                 |
| Radome Material      | ASA + Glass 20% (prevent UV) |                 |
| Mechanical Down Tilt | 0°~ 20°                      |                 |

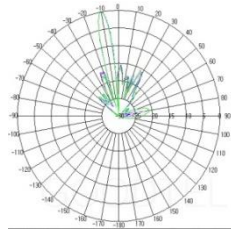
XX POL  
2300~2400MHZ



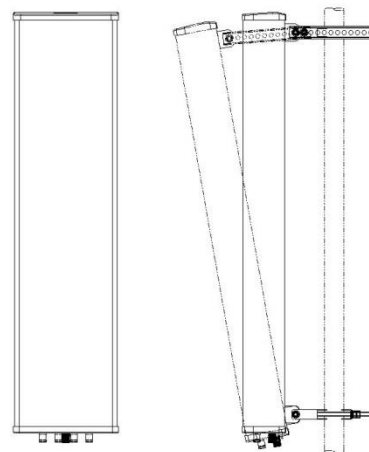
Horizontal



Vertical 0T



Vertical 10T



Install Configuration



Product Specifications Sheet XX series for BTS

XXHE65-14.5V10

2 x 2300~2400MHz  
Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

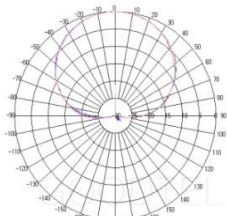


Electrical Specifications

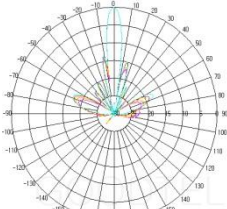
|                                |            |           |
|--------------------------------|------------|-----------|
| Frequency Band(MHz)            |            | 2300~2400 |
| Gain                           |            | 14.5dBi   |
| Polarization                   |            | ±45°      |
| Half Power Beam width          | Horizontal | 65°       |
|                                | Vertical   | 12°       |
| Electrical Tilt                |            | 0°~ 10°   |
| Upper 1st Sidelobe Suppression |            | 15dB      |
| Front-to-Back Ratio            |            | 25dB      |
| Isolation between Ports        |            | 25dB      |
| VSWR                           |            | 1.5:1     |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc   |
| Maximum Input Power            |            | 250W      |
| Impedance                      |            | 50Ω       |
| Cross Polar Ratio              |            | 20dB      |

Mechanical Specifications

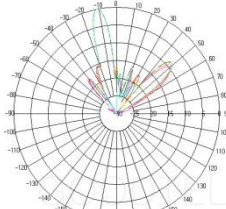
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/700/115mm                |
| Weight               |       | 6Kg                          |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Adjustment wheel     |       | 1EA                          |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA + Glass 20% (prevent UV) |
| Mechanical Down Tilt |       | 0°~ 20°                      |



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

XX POL  
2300~2400MHz

# Product Specifications Sheet XX series for BTS

XXHE65-17V10

2 x 2300~2400MHz

Dual Polarization

65° Horizontal Beam Width, Variable Tilt

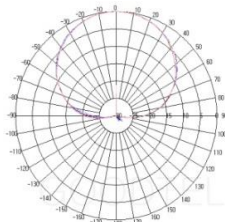


## Electrical Specifications

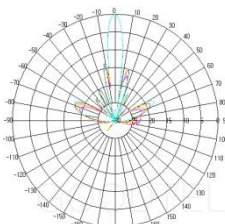
|                                |            |         |
|--------------------------------|------------|---------|
| Frequency Band(MHz)            | 2300~2400  |         |
| Gain                           | 17dBi      |         |
| Polarization                   | ±45°       |         |
| Half Power Beam width          | Horizontal | 65°     |
|                                | Vertical   | 7°      |
| Electrical Tilt                | 0°~ 10°    |         |
| Upper 1st Sidelobe Suppression | 15dB       |         |
| Front-to-Back Ratio            | 30dB       |         |
| Isolation between Ports        | 25dB       |         |
| VSWR                           | 1.5:1      |         |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc |
| Maximum Input Power            | 250W       |         |
| Impedance                      | 50Ω        |         |
| Cross Polar Ratio              | 20dB       |         |

## Mechanical Specifications

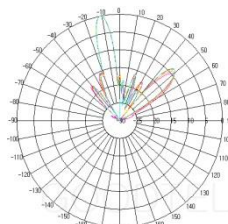
|                      |                              |                |
|----------------------|------------------------------|----------------|
| Dimension            | W/H/D                        | 265/1120/115mm |
| Weight               | 8Kg                          |                |
| Connector Type       | 4 x 7/16 DIN Female & Bottom |                |
| Adjustment wheel     | 1EA                          |                |
| Rated Wind Velocity  | 60m/s                        |                |
| Radome Material      | ASA + Glass 20% (prevent UV) |                |
| Mechanical Down Tilt | 0°~ 20°                      |                |



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

XX POL  
2300~2400MHZ

Product Specifications Sheet XX series for BTS

XXHE65-18.5V10

2 x 2300~2400MHz  
Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

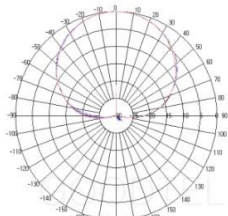


Electrical Specifications

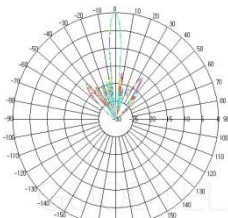
|                                |            |           |
|--------------------------------|------------|-----------|
| Frequency Band(MHz)            |            | 2300~2400 |
| Gain                           |            | 18.5dBi   |
| Polarization                   |            | ±45°      |
| Half Power Beam width          | Horizontal | 65°       |
|                                | Vertical   | 5.3°      |
| Electrical Tilt                |            | 0°~ 10°   |
| Upper 1st Sidelobe Suppression |            | 15dB      |
| Front-to-Back Ratio            |            | 25dB      |
| Isolation between Ports        |            | 25dB      |
| VSWR                           |            | 1.5:1     |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc   |
| Maximum Input Power            |            | 250W      |
| Impedance                      |            | 50Ω       |
| Cross Polar Ratio              |            | 20dB      |

Mechanical Specifications

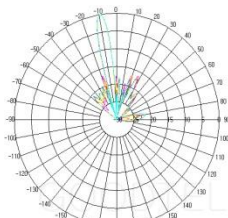
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1470/115mm               |
| Weight               |       | 11Kg                         |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Adjustment wheel     |       | 1EA                          |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA + Glass 20% (prevent UV) |
| Mechanical Down Tilt |       | 0°~ 20°                      |



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

XX POL  
2300~2400MHZ

## Index Multi Band

| MULTI BAND |                                         |      |           |           |                  |                       |      |
|------------|-----------------------------------------|------|-----------|-----------|------------------|-----------------------|------|
| Type       | Frequency Range (MHz)                   | Port | H-HPBW(°) | Gain(dBi) | Electric Tilt(°) | Model                 | Page |
| XX-POL     | 824~894/1710~2170                       | 4    | 65        | 13        | 0~14             | XXSA65-13V14          | 77   |
|            |                                         | 4    | 65        | 15        | 0~14             | XXSA65-15V14          | 78   |
|            |                                         | 4    | 65        | 15        | 0~14             | XXSA65-15V14D         | 79   |
|            | 824~894/2500~2690                       | 4    | 65        | 15/16     | 0~10             | XXSF65-1516V10        | 80   |
|            | 806~960/1710~2170                       | 4    | 33        | 19        | 0~12             | XXAA33-19V12          | 81   |
|            |                                         | 4    | 65        | 15/18     | 0,4,8            | XXAA65-1518T*         | 82   |
|            |                                         | 4    | 65        | 15/18     | 0~10             | XXAA65-1518V10        | 83   |
|            |                                         | 4    | 65        | 16/18     | 0,4,8            | XXAA65-1618T*         | 84   |
|            |                                         | 4    | 65        | 16/18     | 0~10             | XXAA65-1618V10        | 85   |
|            |                                         | 4    | 65        | 17/18     | 0,4,8            | XXAA65-1718T*         | 86   |
|            |                                         | 4    | 65        | 17/18     | 0~10             | XXAA65-1718V10        | 87   |
|            | 890~960/1920~2170                       | 4    | 65        | 17        | 3~15             | XXGW65-17V15S         | 88   |
|            | 718~803/1710~1880                       | 4    | 65        | 17        | 3~15             | XXJD65-17V15S         | 89   |
| 3X-POL     | 806~960/<br>1710~1880/<br>1920~2170     | 6    | 65        | 16        | 0,4,8            | 3XLAHDW65-16T*        | 90   |
|            |                                         | 6    | 65        | 16        | 0~10             | 3XLAHDW65-16V10       | 91   |
|            |                                         | 6    | 65        | 17        | 0,4,8            | 3XLAHDW65-17T*        | 92   |
|            |                                         | 6    | 65        | 17        | 0~10             | 3XLAHDW65-17V10       | 93   |
|            | 806~960/<br>1710~2170/<br>1710~2170     | 6    | 65        | 16        | 0,4,8            | 3XLAHAA65-16T*        | 94   |
|            |                                         | 6    | 65        | 16        | 0~10             | 3XLAHAA65-16V10       | 95   |
|            |                                         | 6    | 65        | 17        | 0,4,8            | 3XLAHAA65-17T*        | 96   |
|            |                                         | 6    | 65        | 17        | 0~10             | 3XLAHAA65-17V10       | 97   |
|            |                                         | 6    | 65        | 16/17     | 0~10             | 3XA2A65-1617V10       | 98   |
|            |                                         | 6    | 65        | 17/18     | 0~10             | 3XA2A65-1718V10       | 99   |
|            |                                         | 6    | 65        | 15        | 0~10             | 3XLSHAF65-15V10       | 100  |
|            | 824~894/1710~2170/2500~2690             | 6    | 65        | 13        | 0~10             | 3XLSHAF65-13V10       | 101  |
|            | 824~960/1710~2170/2300~2690             | 6    | 65        | 17        | 0~10             | 3XLCHAI65-17V10       | 102  |
|            | 1710~2700                               | 6    | 65        | 18        | 0~10             | 3XHT65-18V10          | 103  |
| 4X-POL     | 790~960/1710~1880/1710~2170             | 8    | 65        | 15/18/17  | 0~10             | 4XBD65HA35-151817V10D | 104  |
|            |                                         | 8    | 65        | 16/18/18  | 0~10             | 4XBD65HA35-1618V10D   | 105  |
| 6X-POL     | 698~806/824~960/<br>1710~1880/2300~2400 | 12   | 65        | 15/<br>17 | 0~16/<br>0~10    | 6XLRCHDE65-1517V10DS  | 106  |



# Product Specifications Sheet XX series for BTS

XXSA65-13V14

824~894 / 1710~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt



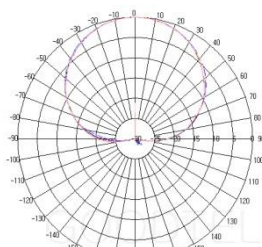
## Electrical Specifications

| Frequency Band                 |            | 824~894MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 13dBi      | 13.2dBi      | 13.4dBi      |
| Polarization                   |            | ±45°/ ±45° |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 21°        | 21°          | 20°          |
| Electrical Tilt                |            |            | 0°~ 14°      |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 23dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |              |              |
| Maximum Input Power            |            |            | 200W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB       |              |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

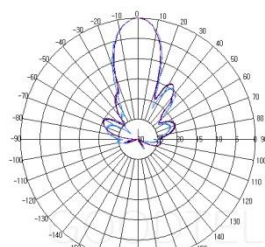
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/995/145mm                |
| Weight               |       | 7.5Kg                        |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 30°                     |

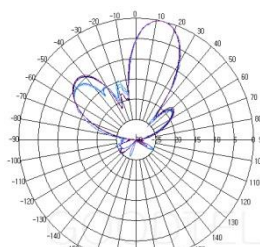
LOW



Horizontal

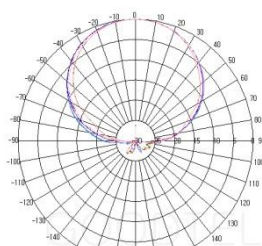


Vertical 0T

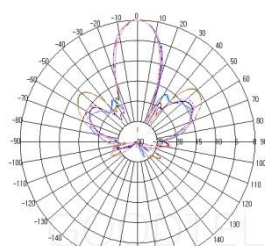


Vertical 14T

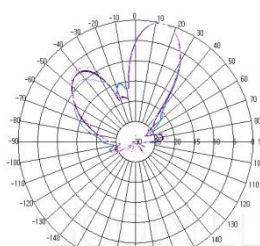
HIGH



Horizontal



Vertical 0T



Vertical 14T



Install Configuration

Multi-band



# Product Specifications Sheet XX series for BTS

XXSA65-15V14

824~894 / 1710~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt



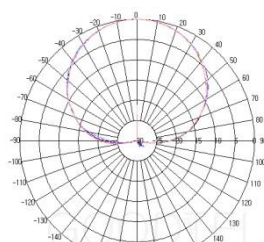
## Electrical Specifications

| Frequency Band                 |            | 824~894MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 15dBi      | 15.2dBi      | 15.4dBi      |
| Polarization                   |            | ±45°/ ±45° |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 12°        | 12°          | 11.5°        |
| Electrical Tilt                |            | 0°~ 14°    |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB       |              |              |
| Front-to-Back Ratio            |            | 25dB       |              |              |
| Isolation between Ports        |            | 30dB       |              |              |
| VSWR                           |            | 1.5:1      |              |              |
| Intermodulation IM3            |            | 2 x 43dBm  |              |              |
| Maximum Input Power            |            | 250W       |              |              |
| Impedance                      |            | 50Ω        |              |              |
| Cross Polar Ratio              | 0°         | 20dB       |              |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            | 2dB        |              |              |
| Squint                         |            | ±2.5°      |              |              |

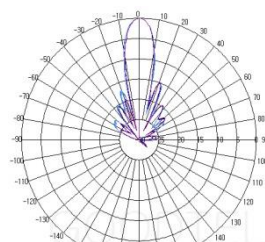
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1495/145mm               |
| Weight               |       | 10Kg                         |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

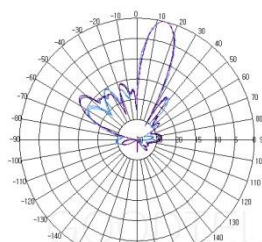
LOW



Horizontal

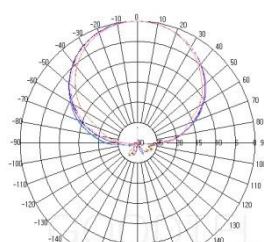


Vertical 0T

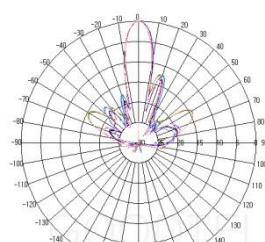


Vertical 14T

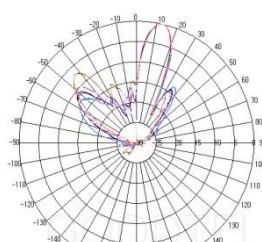
HIGH



Horizontal



Vertical 0T



Vertical 14T



Install Configuration

Multi-band

# Product Specifications Sheet XX series for BTS

XXSA65-15V14D

824~894 / 1710~2170MHz

Multi Band Dual Polarization, Include Diplexer

65° Horizontal Beam Width, Variable Tilt



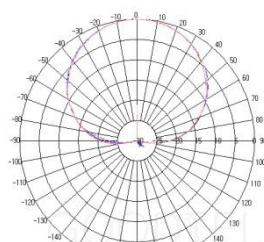
## Electrical Specifications

| Frequency Band                 |            | 824~894MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 15dBi      | 15.2dBi      | 15.4dBi      |
| Polarization                   |            | ±45°/ ±45° |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 12°        | 12°          | 11.5°        |
| Electrical Tilt                |            | 0°~ 14°    |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB       |              |              |
| Front-to-Back Ratio            |            | 25dB       |              |              |
| Isolation between Ports        |            | 30dB       |              |              |
| VSWR                           |            | 1.5:1      |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |              |              |
| Maximum Input Power            |            | 250W       |              |              |
| Impedance                      |            | 50Ω        |              |              |
| Cross Polar Ratio              | 0°         | 20dB       |              |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            | 2dB        |              |              |
| Squint                         |            | ±2.5°      |              |              |

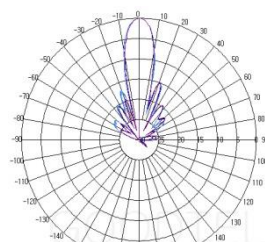
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1495/145mm               |
| Weight               |       | 10Kg                         |
| Connector Type       |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

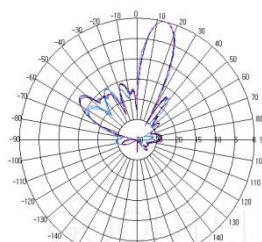
LOW



Horizontal

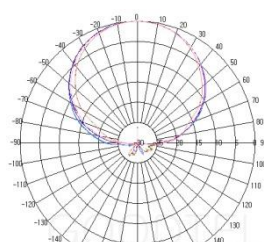


Vertical 0T

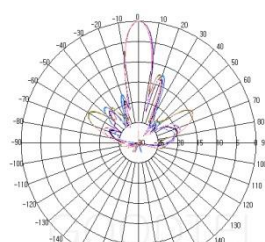


Vertical 14T

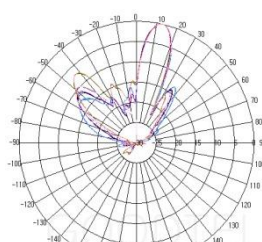
HIGH



Horizontal



Vertical 0T



Vertical 14T



Install Configuration

Multi-band

# Product Specifications Sheet XX series for BTS

XXSF65-1516V1410

824~894 / 2500~2690MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt



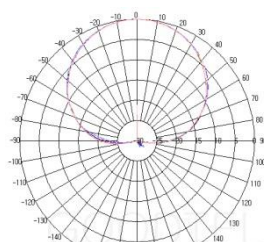
## Electrical Specifications

|                                |                |                               |              |
|--------------------------------|----------------|-------------------------------|--------------|
| Frequency Band                 |                | 824~894MHz                    | 2500~2690MHz |
| Gain                           |                | 15dBi                         | 16dBi        |
| Polarization                   |                | $\pm 45^\circ / \pm 45^\circ$ |              |
| Half Power Beam width          | Horizontal     | 65°                           | 61°          |
|                                | Vertical       | 12°                           | 9°           |
| Electrical Tilt                |                | 0°~ 14°                       | 0°~ 10°      |
| Upper 1st Sidelobe Suppression |                | 15dB                          |              |
| Front-to-Back Ratio            |                | 25dB                          |              |
| Isolation between Ports        |                | 30dB                          |              |
| VSWR                           |                | 1.5:1                         |              |
| Intermodulation IM3            | 2 x 43dBm      | -150dBc                       |              |
| Maximum Input Power            |                | 250W                          |              |
| Impedance                      |                | 50Ω                           |              |
| Cross Polar Ratio              | 0°             | 20dB                          |              |
|                                | $\pm 60^\circ$ | 10dB                          | 8dB          |
| Tracking                       |                | 2dB                           |              |
| Squint                         |                | $\pm 2.5^\circ$               |              |

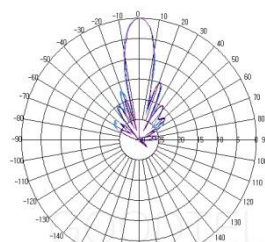
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1550/145mm               |
| Weight               |       | 10Kg                         |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

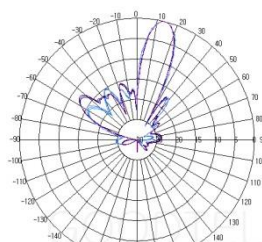
LOW



Horizontal

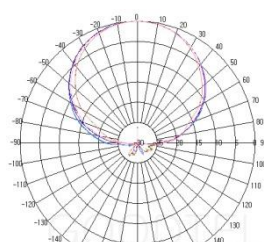


Vertical 0T

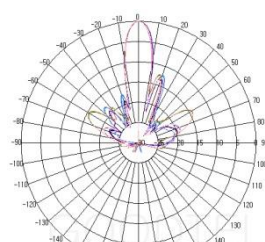


Vertical 14T

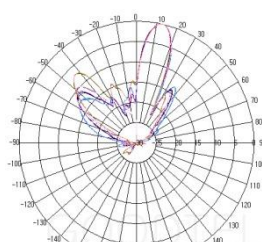
HIGH



Horizontal



Vertical 0T



Vertical 14T



Install Configuration

Multi-band

# Product Specifications Sheet XX series for BTS

XXAA33-19V12

**806~960 / 1710~2170MHz**  
**Multi Band Dual Polarization**  
**33° Horizontal Beam Width, Variable Tilt**

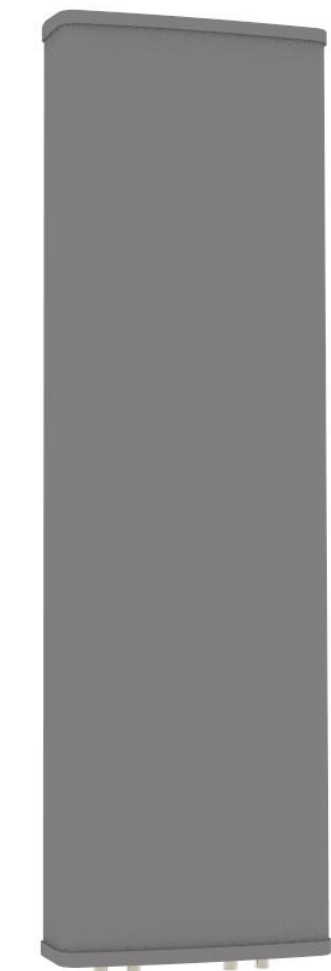
## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~2170MHz |
|--------------------------------|------------|------------|--------------|
| Gain                           |            | 18.5dBi    | 19dBi        |
| Polarization                   |            | ±45°       |              |
| Half Power Beam width          | Horizontal | 33°        | 33°          |
|                                | Vertical   | 11°        | 10°          |
| Electrical Tilt                |            | 0° ~ 12°   |              |
| Upper 1st Sidelobe Suppression |            | 15dB       |              |
| Front-to-Back Ratio            |            | 25dB       |              |
| Isolation                      |            | 30dB       |              |
| VSWR                           |            | 1.5:1      |              |
| Intermodulation IM3            |            | 2 x 43dBm  | -150dBc      |
| Maximum Input Power            |            | 300W       |              |
| Impedance                      |            | 50Ω        |              |
| Cross Polar Ratio              |            | 0°         | 20dB         |
| Tracking                       |            | -          |              |
| Squint                         |            | -          |              |

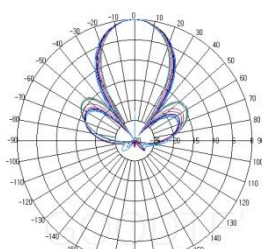
## Mechanical Specifications

|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/H/D | 520/1990/170mm               |
| Weight (exclude bracket) |       | 25Kg                         |
| Connector Type           |       | 4 x 7/16 DIN Female & Bottom |
| Adjustment wheel         |       | 2EA                          |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 10°                     |

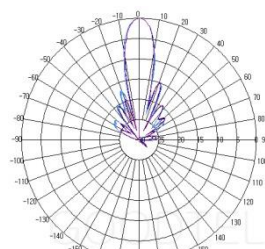
Multi-band



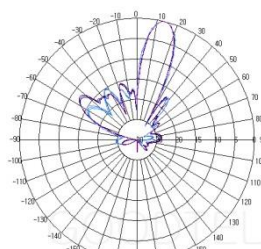
LOW



Horizontal

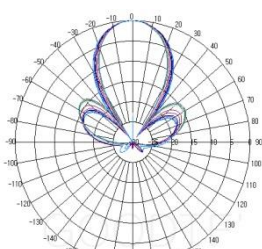


Vertical 0T

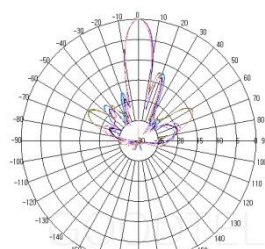


Vertical 12T

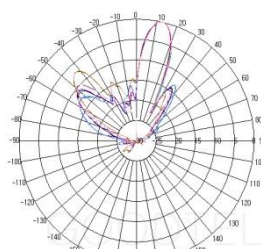
HIGH



Horizontal



Vertical 0T



Vertical 12T



Install Configuration



# Product Specifications Sheet XX series for BTS

XXAA65-1518T0/4/8

806~960 / 1710~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt



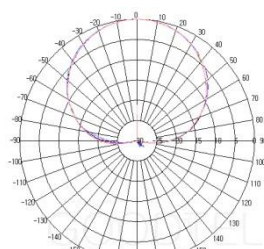
## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 15dBi      | 17.5dBi      | 17.8dBi      |
| Polarization                   |            | ±45°/ ±45° |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 12°        | 6.8°         | 6.3°         |
| Electrical Tilt                |            | 0°, 4°, 8° |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB       |              |              |
| Front-to-Back Ratio            |            | 25dB       |              |              |
| Isolation between Ports        |            | 30dB       |              |              |
| VSWR                           |            | 1.5:1      |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |              |              |
| Maximum Input Power            |            | 250W       |              |              |
| Impedance                      |            | 50Ω        |              |              |
| Cross Polar Ratio              | 0°         | 20dB       |              |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            | 2dB        |              |              |
| Squint                         |            | ±2.5°      |              |              |

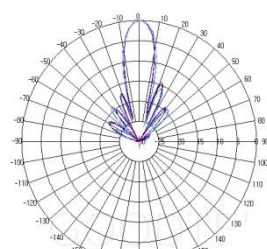
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1495/145mm               |
| Weight               |       | 11Kg                         |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

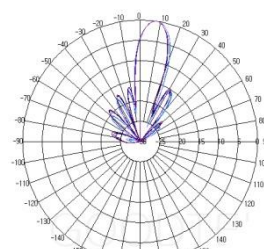
LOW



Horizontal

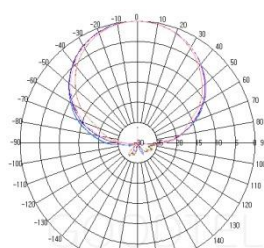


Vertical 0T

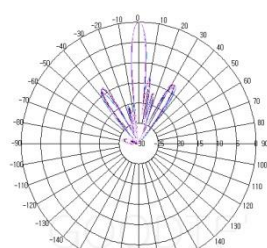


Vertical 8T

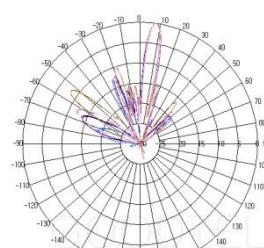
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration

Multi-band



# Product Specifications Sheet XX series for BTS

XXAA65-1518V10

806~960 / 1710~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt



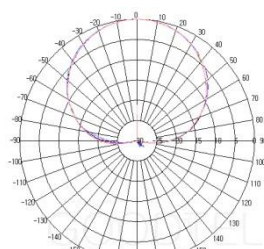
## Electrical Specifications

| Frequency Band                 |            | 806~<br>960MHz | 1710~<br>1880MHz | 1920~<br>2170MHz |
|--------------------------------|------------|----------------|------------------|------------------|
| Gain                           |            | 15dBi          | 17.5dBi          | 17.8dBi          |
| Polarization                   |            | ±45°/ ±45°     |                  |                  |
| Half Power Beam width          | Horizontal | 65°            | 64°              | 61°              |
|                                | Vertical   | 12°            | 6.8°             | 6.3°             |
| Electrical Tilt                |            |                | 0°~ 10°          |                  |
| Upper 1st Sidelobe Suppression |            |                | 15dB             |                  |
| Front-to-Back Ratio            |            |                | 25dB             |                  |
| Isolation between Ports        |            |                | 30dB             |                  |
| VSWR                           |            |                | 1.5:1            |                  |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc        |                  |                  |
| Maximum Input Power            |            |                | 250W             |                  |
| Impedance                      |            |                | 50Ω              |                  |
| Cross Polar Ratio              | 0°         | 20dB           |                  |                  |
|                                | ±60°       | 10dB           | 10dB             | 8dB              |
| Tracking                       |            |                | 2dB              |                  |
| Squint                         |            |                | ±2.5°            |                  |

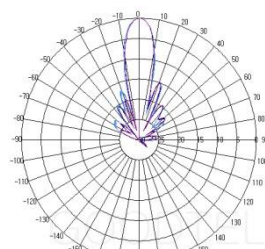
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1495/145mm               |
| Weight               |       | 11Kg                         |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

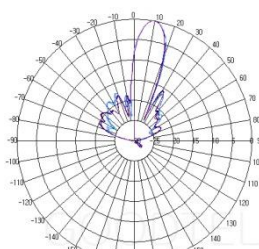
LOW



Horizontal

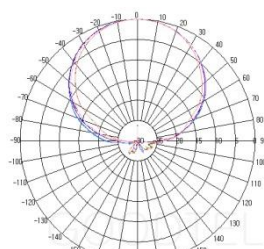


Vertical 0T

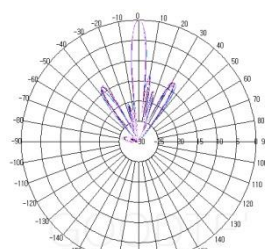


Vertical 10T

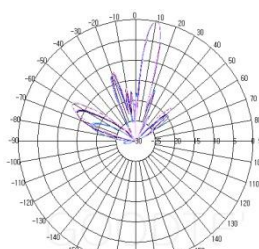
HIGH



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

Multi-band

# Product Specifications Sheet XX series for BTS

XXAA65-1618T0/4/8

806~960 / 1710~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt



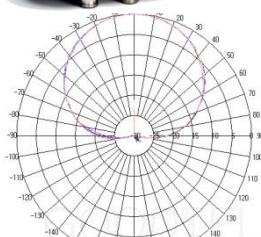
## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 16dBi      | 17.5dBi      | 17.8dBi      |
| Polarization                   |            | ±45°/ ±45° |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 10°        | 6.8°         | 6.3°         |
| Electrical Tilt                |            |            | 0°, 4°, 8°   |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |              |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB       |              |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

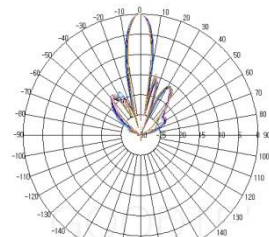
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1995/145mm               |
| Weight               |       | 13Kg                         |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

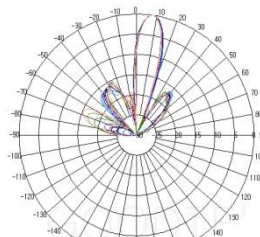
LOW



Horizontal

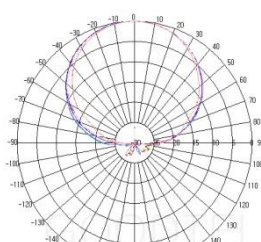


Vertical 0T

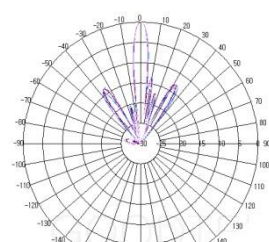


Vertical 8T

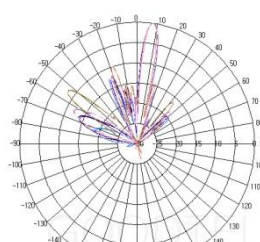
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration

Multi-band

# Product Specifications Sheet XX series for BTS

XXAA65-1618V10

806~960 / 1710~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

|                                |                |                               |              |              |
|--------------------------------|----------------|-------------------------------|--------------|--------------|
| Frequency Band                 |                | 806~960MHz                    | 1710~1880MHz | 1920~2170MHz |
| Gain                           |                | 16dBi                         | 17.5dBi      | 17.8dBi      |
| Polarization                   |                | $\pm 45^\circ / \pm 45^\circ$ |              |              |
| Half Power Beam width          | Horizontal     | 65°                           | 64°          | 61°          |
|                                | Vertical       | 10°                           | 6.8°         | 6.3°         |
| Electrical Tilt                |                | 0° ~ 10°                      |              |              |
| Upper 1st Sidelobe Suppression |                | 15dB                          |              |              |
| Front-to-Back Ratio            |                | 25dB                          |              |              |
| Isolation between Ports        |                | 30dB                          |              |              |
| VSWR                           |                | 1.5:1                         |              |              |
| Intermodulation IM3            | 2 x 43dBm      | -150dBc                       |              |              |
| Maximum Input Power            |                | 300W                          |              |              |
| Impedance                      |                | 50Ω                           |              |              |
| Cross Polar Ratio              | 0°             | 20dB                          |              |              |
|                                | $\pm 60^\circ$ | 10dB                          | 10dB         | 8dB          |
| Tracking                       |                | 2dB                           |              |              |
| Squint                         |                | $\pm 2.5^\circ$               |              |              |

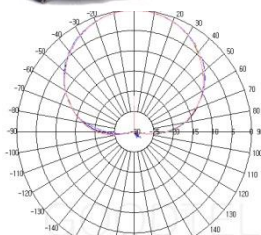
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1995/145mm               |
| Weight               |       | 13Kg                         |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

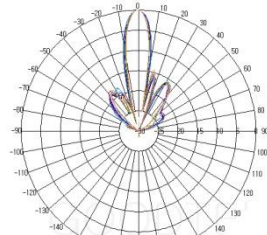
Multi-band



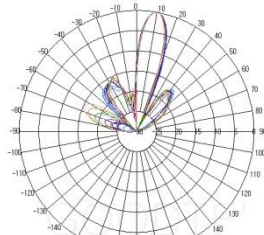
LOW



Horizontal

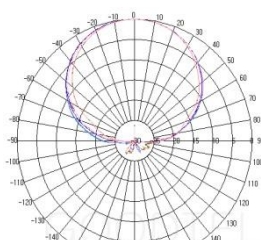


Vertical 0T

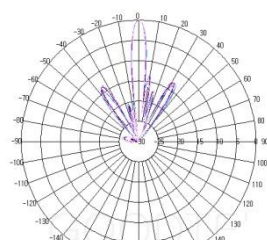


Vertical 10T

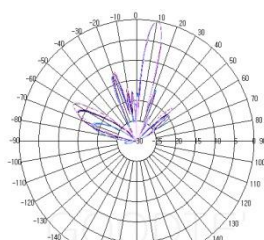
HIGH



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

# Product Specifications Sheet XX series for BTS

XXAA65-1718T0/4/8

806~960 / 1710~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt



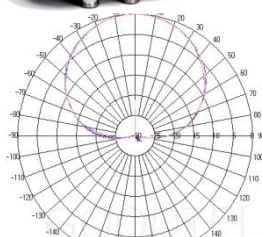
## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 17dBi      | 17.5dBi      | 17.8dBi      |
| Polarization                   |            | ±45°/ ±45° |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 7°         | 6.8°         | 6.3°         |
| Electrical Tilt                |            | 0°, 4°, 8° |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB       |              |              |
| Front-to-Back Ratio            |            | 25dB       |              |              |
| Isolation between Ports        |            | 30dB       |              |              |
| VSWR                           |            | 1.5:1      |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |              |              |
| Maximum Input Power            |            | 300W       |              |              |
| Impedance                      |            | 50Ω        |              |              |
| Cross Polar Ratio              | 0°         | 20dB       |              |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            | 2dB        |              |              |
| Squint                         |            | ±2.5°      |              |              |

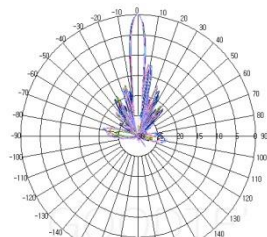
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/145mm               |
| Weight               |       | 15Kg                         |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

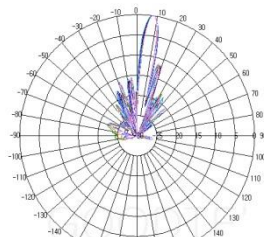
LOW



Horizontal

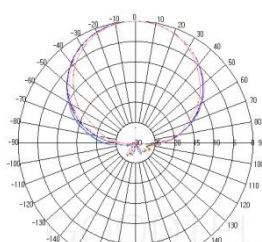


Vertical 0T

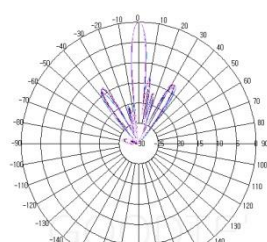


Vertical 8T

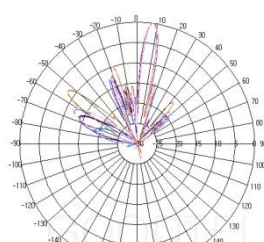
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration

Multi-band



# Product Specifications Sheet XX series for BTS

XXAA65-1718V10

806~960 / 1710~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

|                                |                |                               |              |              |
|--------------------------------|----------------|-------------------------------|--------------|--------------|
| Frequency Band                 |                | 806~960MHz                    | 1710~1880MHz | 1920~2170MHz |
| Gain                           |                | 17dBi                         | 17.5dBi      | 17.8dBi      |
| Polarization                   |                | $\pm 45^\circ / \pm 45^\circ$ |              |              |
| Half Power Beam width          | Horizontal     | 65°                           | 64°          | 61°          |
|                                | Vertical       | 7°                            | 6.8°         | 6.3°         |
| Electrical Tilt                |                | 0° ~ 10°                      |              |              |
| Upper 1st Sidelobe Suppression |                | 15dB                          |              |              |
| Front-to-Back Ratio            |                | 25dB                          |              |              |
| Isolation between Ports        |                | 30dB                          |              |              |
| VSWR                           |                | 1.5:1                         |              |              |
| Intermodulation IM3            | 2 x 43dBm      | -150dBc                       |              |              |
| Maximum Input Power            |                | 300W                          |              |              |
| Impedance                      |                | 50Ω                           |              |              |
| Cross Polar Ratio              | 0°             | 20dB                          |              |              |
|                                | $\pm 60^\circ$ | 10dB                          | 10dB         | 8dB          |
| Tracking                       |                | 2dB                           |              |              |
| Squint                         |                | $\pm 2.5^\circ$               |              |              |

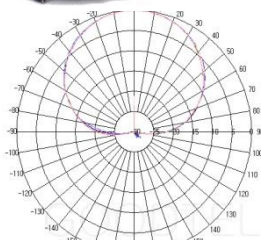
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/145mm               |
| Weight               |       | 15Kg                         |
| Connector Type       |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

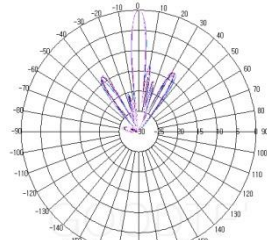
Multi-band



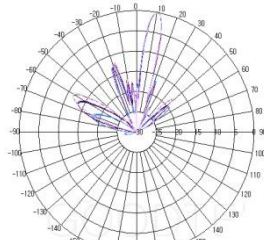
LOW



Horizontal

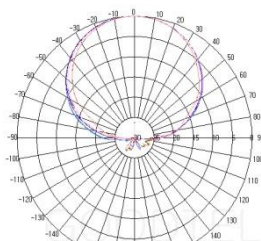


Vertical 0T

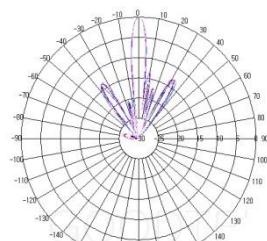


Vertical 10T

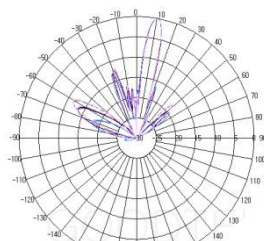
HIGH



Horizontal



Vertical 0T



Vertical 10T



Install Configuration



# Product Specifications Sheet X series for BTS

XXGW65-17V15S

890~960 / 1920~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

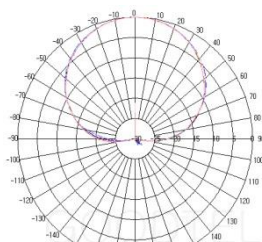
## Electrical Specifications

| Frequency Band                 |            | 890~960MHz               | 1920~2170MHz |
|--------------------------------|------------|--------------------------|--------------|
| Gain                           |            | 17dBi                    | 17dBi        |
| Polarization                   |            | ±45°                     |              |
| Half Power Beam width          | Horizontal | 68°                      | 62°          |
|                                | Vertical   | 7°                       | 6°           |
| Electrical Tilt                |            | 3°~15° (Independent RET) |              |
| Upper 1st Sidelobe Suppression |            | 15dB                     |              |
| Front-to-Back Ratio            |            | 25dB                     |              |
| Isolation between Ports        |            | 30dB                     |              |
| VSWR                           |            | 1.5:1                    |              |
| Intermodulation IM3            |            | 2 x 43dBm                | -150dBc      |
| Maximum Input Power            |            | 300W                     |              |
| Impedance                      |            | 50Ω                      |              |
| Cross Polar Ratio              | 0°         | -                        |              |
|                                | ±60°       | -                        |              |
| Tracking                       |            | 2dB                      |              |
| Squint                         |            | ±2.5°                    |              |

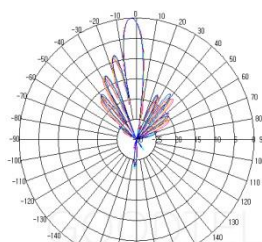
## Mechanical Specifications

|                      |     |                              |
|----------------------|-----|------------------------------|
| Dimension            | Ø/H | 200/2575mm                   |
| Weight               |     | 15Kg                         |
| Connector Type       |     | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |     | 60m/s                        |
| Radome Material      |     | ASA (prevent UV)             |
| Mechanical Down Tilt |     | 0° ~ 7°                      |

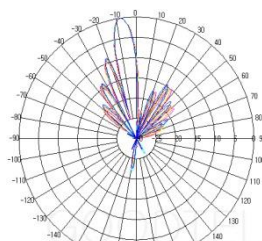
Multi-band



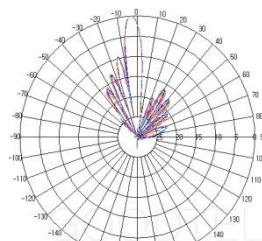
Horizontal



Vertical 3T



Vertical 9T



Vertical 15T



Install Configuration

# Product Specifications Sheet X series for BTS

XXJD65-17V15S

718~803 / 1710~1880MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

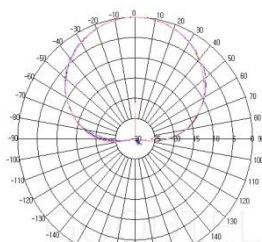
## Electrical Specifications

|                                |                |                          |              |
|--------------------------------|----------------|--------------------------|--------------|
| Frequency Band                 |                | 718~803MHz               | 1710~1880MHz |
| Gain                           |                | 16.5dBi                  | 17dBi        |
| Polarization                   |                | $\pm 45^\circ$           |              |
| Half Power Beam width          | Horizontal     | 68°                      | 62°          |
|                                | Vertical       | 8°                       | 7°           |
| Electrical Tilt                |                | 3°~15° (Independent RET) |              |
| Upper 1st Sidelobe Suppression |                | 15dB                     |              |
| Front-to-Back Ratio            |                | 25dB                     |              |
| Isolation between Ports        |                | 30dB                     |              |
| VSWR                           |                | 1.5:1                    |              |
| Intermodulation IM3            | 2 x 43dBm      | -150dBc                  |              |
| Maximum Input Power            |                | 300W                     |              |
| Impedance                      |                | 50Ω                      |              |
| Cross Polar Ratio              | 0°             | -                        |              |
|                                | $\pm 60^\circ$ | -                        |              |
| Tracking                       |                | 2dB                      |              |
| Squint                         |                | $\pm 2.5^\circ$          |              |

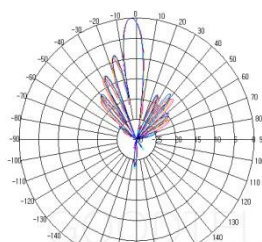
## Mechanical Specifications

|                      |     |                              |
|----------------------|-----|------------------------------|
| Dimension            | Ø/H | 250/2575mm                   |
| Weight               |     | 15Kg                         |
| Connector Type       |     | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |     | 60m/s                        |
| Radome Material      |     | ASA (prevent UV)             |
| Mechanical Down Tilt |     | 0° ~ 7°                      |

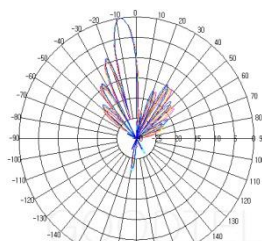
Multi-band



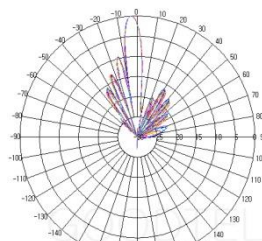
Horizontal



Vertical 3T



Vertical 9T



Vertical 15T



Install Configuration

# Product Specifications Sheet 3X series for BTS

3XLAHDW65-16T0/4/8

806~960 / 1710~1880 / 1920~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt



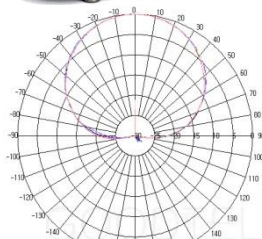
## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 16dBi      | 16.1dBi      | 16.3dBi      |
| Polarization                   |            | ±45°       | ±45°         | ±45°         |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 10°        | 10°          | 9.5°         |
| Electrical Tilt                |            |            | 0°, 4°, 8°   |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |            | -150dBc      |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

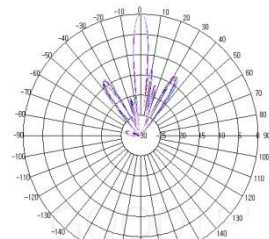
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1995/145mm               |
| Weight               |       | 13Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

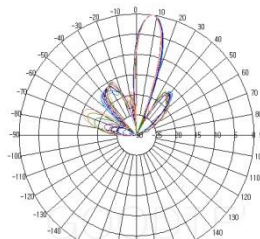
LOW



Horizontal

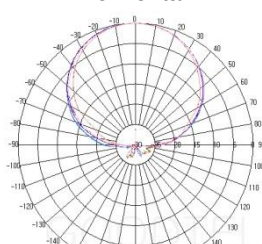


Vertical 0T

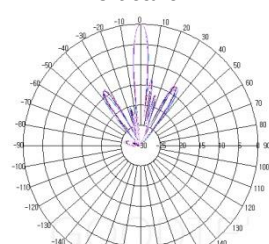


Vertical 8T

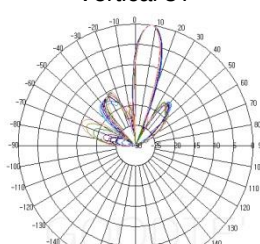
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration

Multi-band

# Product Specifications Sheet 3X series for BTS

3XLAHDW65-16V10

806~960 / 1710~1880 / 1920~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 16dBi      | 16.1dBi      | 16.3dBi      |
| Polarization                   |            | ±45°       | ±45°         | ±45°         |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 10°        | 10°          | 9.5°         |
| Electrical Tilt                |            |            | 0°~ 10°      |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |            | -150dBc      |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | +2.5°        |              |

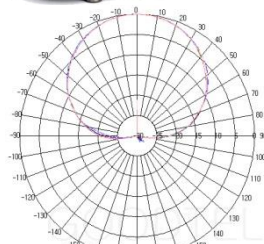
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1995/145mm               |
| Weight               |       | 13Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

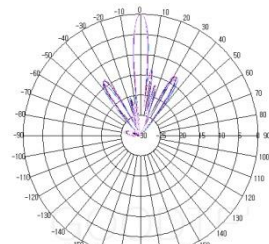
Multi-band



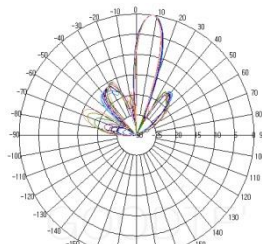
LOW



Horizontal

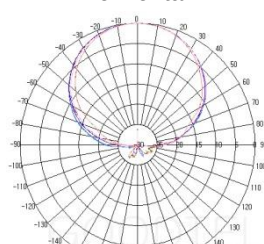


Vertical 0T

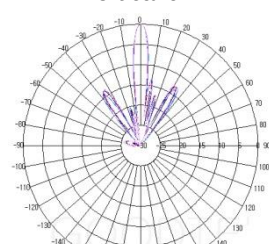


Vertical 8T

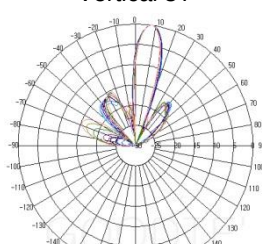
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration



# Product Specifications Sheet 3X series for BTS

3XLAHDW65-17T0/4/8

806~960 / 1710~1880 / 1920~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt

## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 16dBi      | 16.1dBi      | 16.3dBi      |
| Polarization                   |            | ±45°       | ±45°         | ±45°         |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 7°         | 8°           | 7.7°         |
| Electrical Tilt                |            |            | 0°, 4°, 8°   |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |            | -150dBc      |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

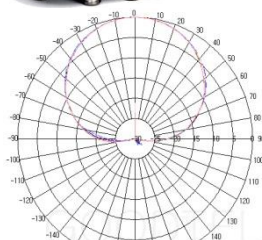
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/145mm               |
| Weight               |       | 15Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

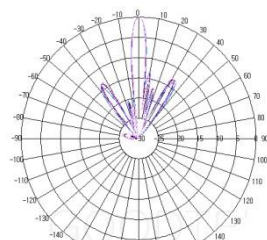
Multi-band



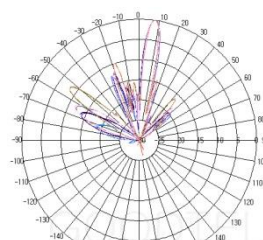
LOW



Horizontal

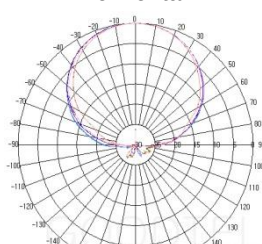


Vertical 0T

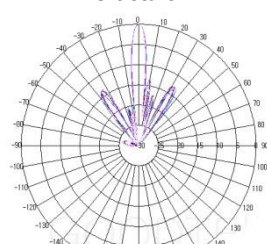


Vertical 8T

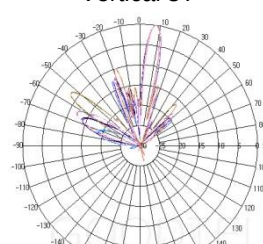
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration



# Product Specifications Sheet 3X series for BTS

3XLAHDW65-17V10

806~960 / 1710~1880 / 1920~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 16dBi      | 16.1dBi      | 16.3dBi      |
| Polarization                   |            | ±45°       | ±45°         | ±45°         |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 7°         | 8°           | 7.7°         |
| Electrical Tilt                |            |            | 0°~ 10°      |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            |            | 2 x 43dBm  |              | -150dBc      |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

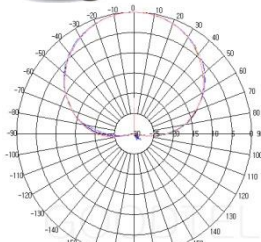
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/145mm               |
| Weight               |       | 15Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

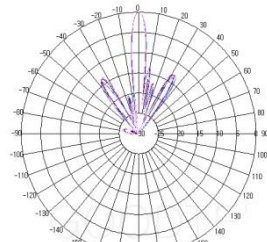
Multi-band



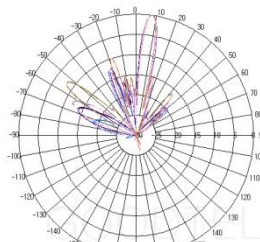
LOW



Horizontal

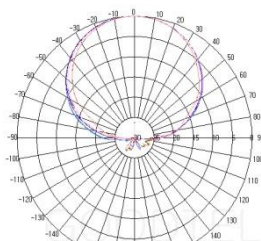


Vertical 0T

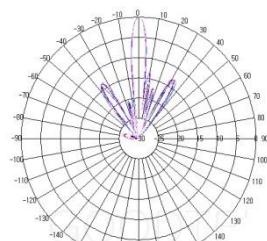


Vertical 8T

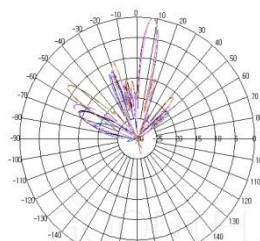
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration

# Product Specifications Sheet 3X series for BTS

3XLAHAA65-16T0/4/8

806~960 / 1710~2170 / 1710~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt

## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 16dBi      | 16.1dBi      | 16.3dBi      |
| Polarization                   |            | ±45°       | 2 x ±45°     |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 10°        | 10°          | 9.5°         |
| Electrical Tilt                |            |            | 0°, 4°, 8°   |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |            | -150dBc      |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

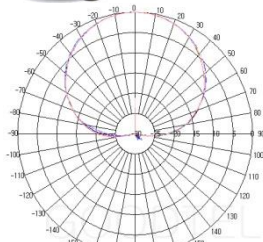
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1995/145mm               |
| Weight               |       | 13Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

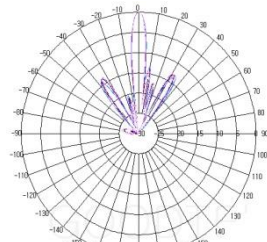
Multi-band



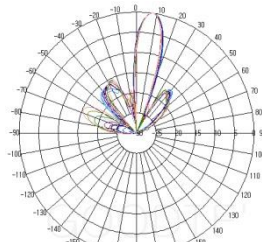
LOW



Horizontal

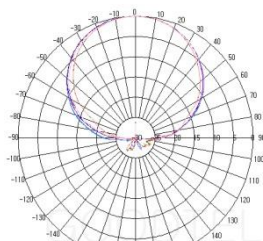


Vertical 0T

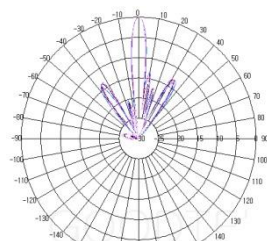


Vertical 8T

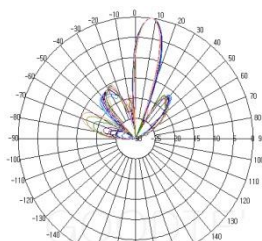
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration

# Product Specifications Sheet 3X series for BTS

3XLAHAA65-16V10

806~960 / 1710~1880 / 1920~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

| Frequency Band                 |            | 806~<br>960MHz | 1710~<br>1880MHz | 1920~<br>2170MHz |
|--------------------------------|------------|----------------|------------------|------------------|
| Gain                           |            | 16dBi          | 16.1dBi          | 16.3dBi          |
| Polarization                   |            | ±45°           | 2 x ±45°         |                  |
| Half Power Beam width          | Horizontal | 65°            | 64°              | 61°              |
|                                | Vertical   | 10°            | 10°              | 9.5°             |
| Electrical Tilt                |            |                | 0°~ 10°          |                  |
| Upper 1st Sidelobe Suppression |            |                | 15dB             |                  |
| Front-to-Back Ratio            |            |                | 25dB             |                  |
| Isolation between Ports        |            |                | 30dB             |                  |
| VSWR                           |            |                | 1.5:1            |                  |
| Intermodulation IM3            | 2 x 43dBm  |                | -150dBc          |                  |
| Maximum Input Power            |            |                | 300W             |                  |
| Impedance                      |            |                | 50Ω              |                  |
| Cross Polar Ratio              | 0°         |                | 20dB             |                  |
|                                | ±60°       | 10dB           | 10dB             | 8dB              |
| Tracking                       |            |                | 2dB              |                  |
| Squint                         |            |                | ±2.5°            |                  |

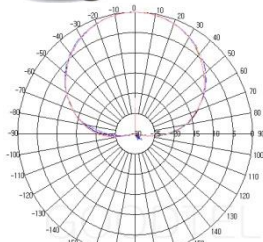
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1995/145mm               |
| Weight               |       | 13Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

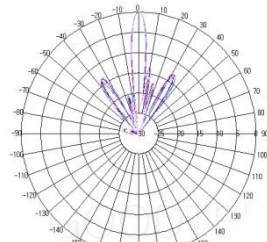
Multi-band



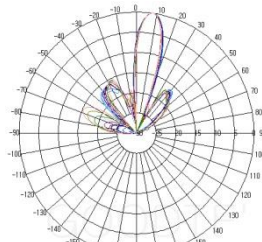
LOW



Horizontal

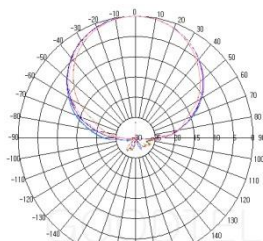


Vertical 0T

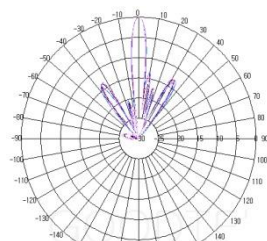


Vertical 8T

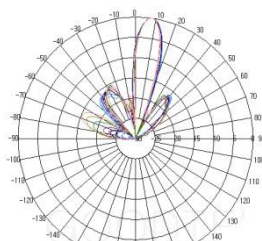
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration

# Product Specifications Sheet 3X series for BTS

3XLAHAA65-17T0/4/8

806~960 / 1710~2170 / 1710~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt



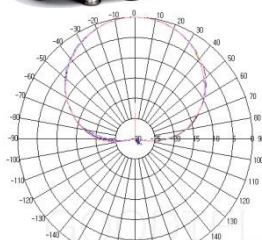
## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 16dBi      | 16.1dBi      | 16.3dBi      |
| Polarization                   |            | ±45°       | 2 x ±45°     |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 7°         | 8°           | 7.7°         |
| Electrical Tilt                |            |            | 0°, 4°, 8°   |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            |            | 2 x 43dBm  | -150dBc      |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

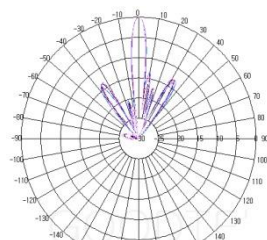
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/145mm               |
| Weight               |       | 15Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

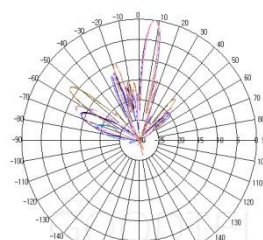
LOW



Horizontal

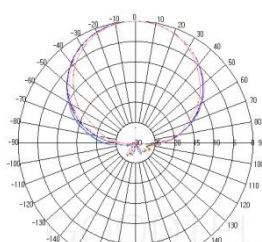


Vertical 0T

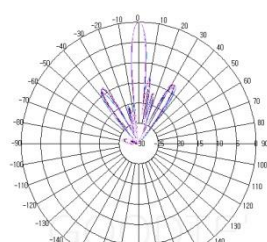


Vertical 8T

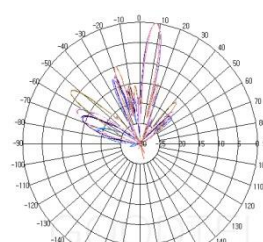
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration

Multi-band



# Product Specifications Sheet 3X series for BTS

3XLAHAA65-17V10

806~960 / 1710~1880 / 1920~2170MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 16dBi      | 16.1dBi      | 16.3dBi      |
| Polarization                   |            | ±45°       | 2 x ±45°     |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 7°         | 8°           | 7.7°         |
| Electrical Tilt                |            |            | 0°~ 10°      |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |            | -150dBc      |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

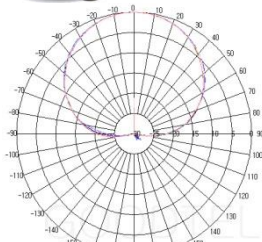
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/145mm               |
| Weight               |       | 15Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

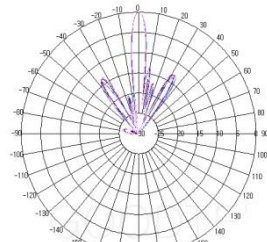
Multi-band



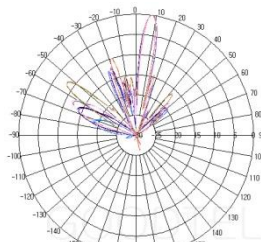
LOW



Horizontal

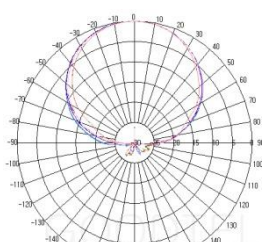


Vertical 0T

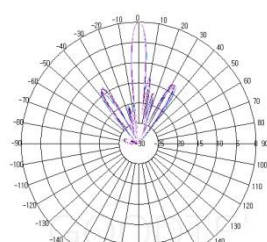


Vertical 8T

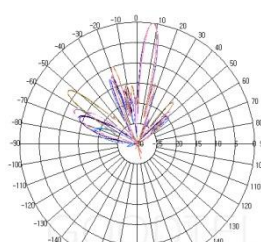
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration



# Product Specifications Sheet 3X series for BTS

3XA2A65-1617V10

1 x 806~960, 2 x 1710~2170MHz  
Multi Band Dual Polarization Antenna  
65° Horizontal Beam Width, Variable Tilt



## Electrical Specifications

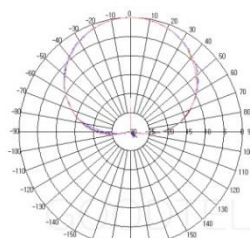
| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 16dBi      | 16.3dBi      | 16.8dBi      |
| Polarization                   |            | ±45°/ ±45° |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 10°        | 10°          | 9°           |
| Electrical Tilt                |            |            | 0°~ 10°      |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |            | -150dBc      |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

## Mechanical Specifications

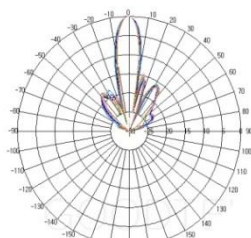
|                      |       |                                                                        |
|----------------------|-------|------------------------------------------------------------------------|
| Dimension            | W/H/D | 265/2050/145mm                                                         |
| Weight               |       | 16Kg                                                                   |
| Connector Type       |       | 806~960MHz : 2 x 7/16 DIN Female<br>1710~2170MHz : 4 x 7/16 DIN Female |
| Adjustment wheel     | 1EA   | 2EA                                                                    |
| Rated Wind Velocity  |       | 60m/s                                                                  |
| Radome Material      |       | ASA (prevent UV)                                                       |
| Mechanical Down Tilt |       | 0° ~ 10°                                                               |

Multi-band

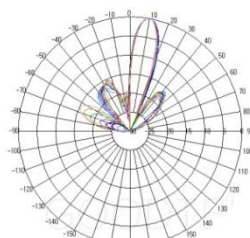
LOW



Horizontal

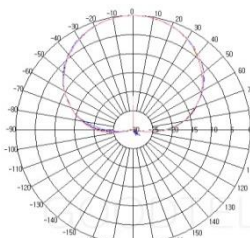


Vertical 0T

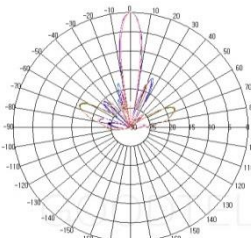


Vertical 10T

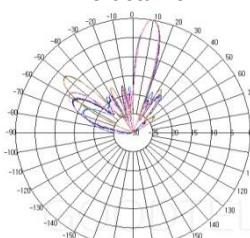
HIGH



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

# Product Specifications Sheet 3X series for BTS

3XA2A65-1718V10

1x806~960MHz, 2 x 1710~2170MHz  
Multi-band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

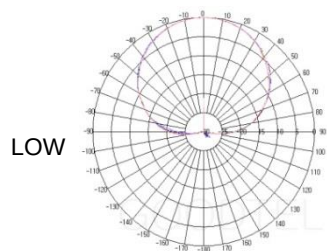


## Electrical Specifications

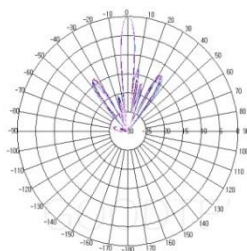
| Frequency Band                 |            | 806~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 17dBi      | 17.5dBi      | 17.8dBi      |
| Polarization                   |            | ±45°/ ±45° |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 7°         | 6.8°         | 6.3°         |
| Electrical Tilt                |            |            | 0°~ 10°      |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |            | -150dBc      |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

## Mechanical Specifications

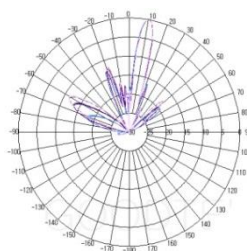
|                      |       |                                                                        |
|----------------------|-------|------------------------------------------------------------------------|
| Dimension            | W/H/D | 265/2700/145mm                                                         |
| Weight               |       | 18Kg                                                                   |
| Connector Type       |       | 806~960MHz : 2 x 7/16 DIN Female<br>1710~2170MHz : 4 x 7/16 DIN Female |
| Adjustment wheel     | 1EA   | 2EA                                                                    |
| Rated Wind Velocity  |       | 60m/s                                                                  |
| Radome Material      |       | ASA (prevent UV)                                                       |
| Mechanical Down Tilt |       | 0° ~ 10°                                                               |



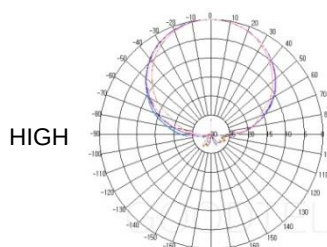
Horizontal



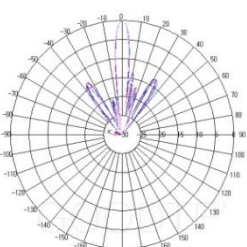
Vertical 0T



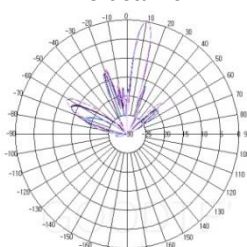
Vertical 10T



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

Multi-band

# Product Specifications Sheet 3X series for BTS

3XLSHAF65-15V10

824~894 / 1710~2170 / 2500~2690MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt



## Electrical Specifications

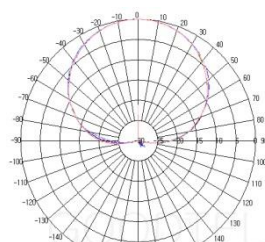
| Frequency Band                 |            | 824~894MHz | 1710~2170MHz | 2500~2690MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 15dBi      | 15dBi        | 15dBi        |
| Polarization                   |            | ±45°       |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 13°        | 12°          | 10°          |
| Electrical Tilt                |            | 0°~ 10°    |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB       |              |              |
| Front-to-Back Ratio            |            | 25dB       |              |              |
| Isolation between Ports        |            | 30dB       |              |              |
| VSWR                           |            | 1.5:1      |              |              |
| Intermodulation IM3            |            | 2 x 43dBm  |              |              |
| Maximum Input Power            |            | -150dBc    |              |              |
| Impedance                      |            | 300W       |              |              |
| Cross Polar Ratio              | 0°         | 50Ω        |              |              |
|                                | ±60°       | 20dB       | 10dB         | 8dB          |
| Tracking                       |            | 10dB       |              |              |
| Squint                         |            | 2dB        |              |              |
|                                |            | ±2.5°      |              |              |

## Mechanical Specifications

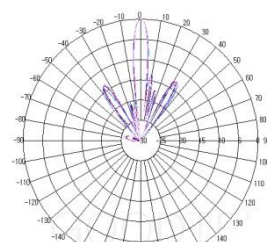
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1550/145mm               |
| Weight               |       | 11Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

Multi-band

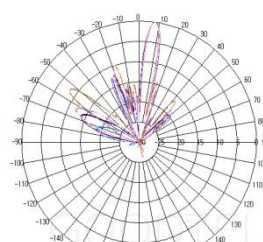
LOW



Horizontal

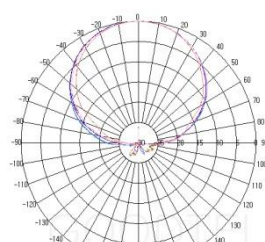


Vertical 0T

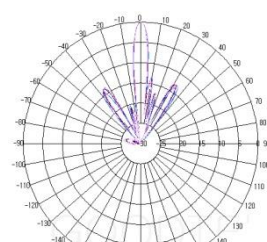


Vertical 8T

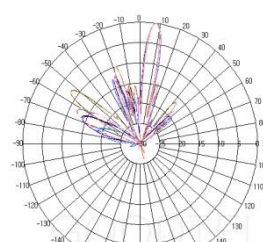
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration

# Product Specifications Sheet 3X series for BTS

3XLSHAF65-13V10

824~894 / 1710~2170 / 2500~2690MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt



## Electrical Specifications

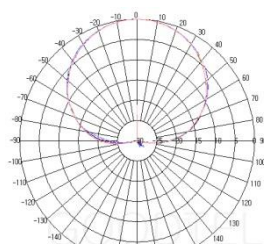
| Frequency Band                 |            | 824~894MHz | 1710~2170MHz | 2500~2690MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 13dBi      | 13dBi        | 13dBi        |
| Polarization                   |            | ±45°       |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 22°        | 20°          | 17°          |
| Electrical Tilt                |            |            | 0°~ 10°      |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |            | -150dBc      |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       | 10dB       | 10dB         | 8dB          |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

## Mechanical Specifications

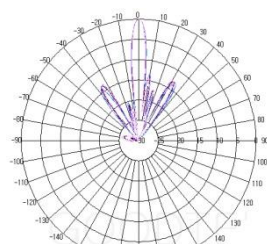
|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/1050/145mm               |
| Weight               |       | 11Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 20°                     |

Multi-band

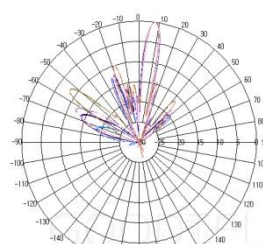
LOW



Horizontal

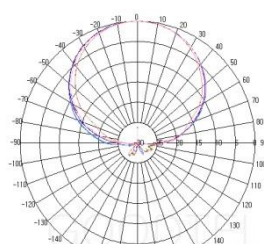


Vertical 0T

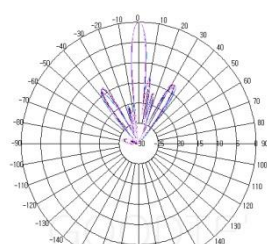


Vertical 8T

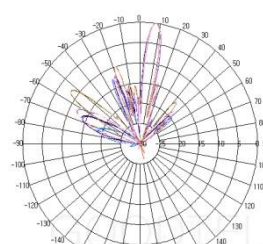
HIGH



Horizontal



Vertical 0T



Vertical 8T



Install Configuration



# Product Specifications Sheet 3X series for BTS

XXXLCHAI65-17V10

824~894 / 1710~2170 / 2300~2690MHz  
Multi Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

## Electrical Specifications

|                                |            |            |              |              |
|--------------------------------|------------|------------|--------------|--------------|
| Frequency Band                 |            | 824~960MHz | 1710~2170MHz | 2300~2690MHz |
| Gain                           |            | 17dBi      | 17dBi        | 17dBi        |
| Polarization                   |            |            | ±45°         |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 7°         | 6°           | 5°           |
| Electrical Tilt                |            |            | 0°~ 10°      |              |
| Upper 1st Sidelobe Suppression |            |            | 15dB         |              |
| Front-to-Back Ratio            |            |            | 25dB         |              |
| Isolation between Ports        |            |            | 30dB         |              |
| VSWR                           |            |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  |            | -150dBc      |              |
| Maximum Input Power            |            |            | 300W         |              |
| Impedance                      |            |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         |            | 20dB         |              |
|                                | ±60°       |            | 10dB         |              |
| Tracking                       |            |            | 2dB          |              |
| Squint                         |            |            | ±2.5°        |              |

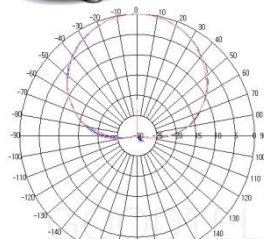
## Mechanical Specifications

|                      |       |                              |
|----------------------|-------|------------------------------|
| Dimension            | W/H/D | 265/2575/145mm               |
| Weight               |       | 15Kg                         |
| Connector Type       |       | 6 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                        |
| Radome Material      |       | ASA (prevent UV)             |
| Mechanical Down Tilt |       | 0° ~ 10°                     |

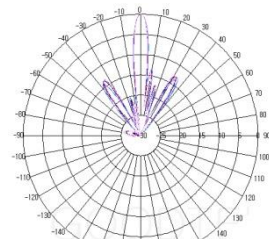
Multi-band



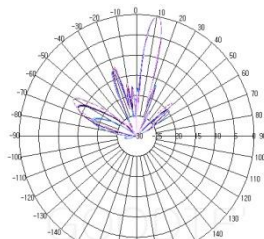
LOW



Horizontal

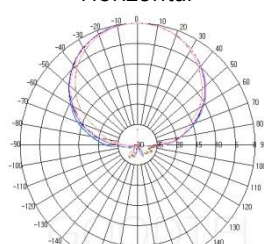


Vertical 0T

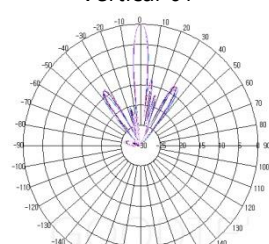


Vertical 10T

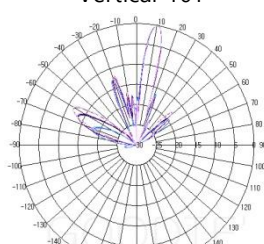
HIGH



Horizontal



Vertical 0T



Vertical 10T



Install Configuration



# Product Specifications Sheet 3X series for BTS

3XHT65-18V10

3 x 1710~2700 MHz  
Multi-band Dual Polarization Antenna  
65° Horizontal Beam Width, Variable Tilt



## Electrical Specifications

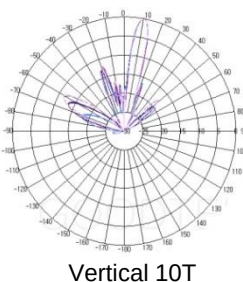
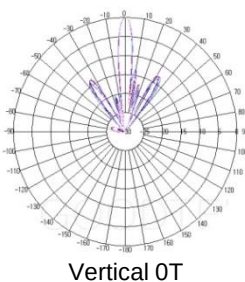
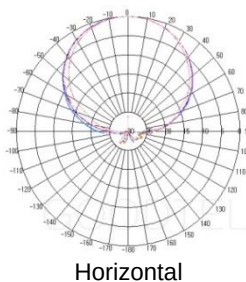
|                                |            |              |              |
|--------------------------------|------------|--------------|--------------|
| Frequency Band                 |            | 1710~2170MHz | 2300~2700MHz |
| Gain                           |            | 17.5dBi      | 18dBi        |
| Polarization                   |            | ±45°         |              |
| Half Power Beam width          | Horizontal | 65°          | 61°          |
|                                | Vertical   | 6°           | 5°           |
| Electrical Tilt                |            | 0°~ 10°      |              |
| Upper 1st Sidelobe Suppression |            | 17dB         |              |
| Front-to-Back Ratio            |            | 30dB         |              |
| Isolation between Ports        |            | 30dB         |              |
| VSWR                           |            | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |
| Maximum Input Power(per port)  |            | 400W         |              |
| Impedance                      |            | 50Ω          |              |
| Cross Polar Ratio              | 0°         | 20dB         |              |
|                                | ±60°       | 10dB         | 8db          |

## Mechanical Specifications

|                      |       |                               |
|----------------------|-------|-------------------------------|
| Dimension            | W/H/D | 432/1390/125mm                |
| Weight               |       | 15Kg                          |
| Connector Type       |       | 10 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity  |       | 60m/s                         |
| Radome Material      |       | ASA (prevent UV)              |
| Mechanical Down Tilt |       | 0° ~ 10°                      |

Multi-band

HIGH



# Product Specifications Sheet 4X series for BTS

**4XBD65HA35-151817V10D**

**1x790~960, 1x1710~1880MHz, 2x1710~2170MHz(Dual beam)  
Multi-band Dual Polarization and Dual Beam Antenna  
65°/35° Horizontal Beam Width, Variable Tilt**



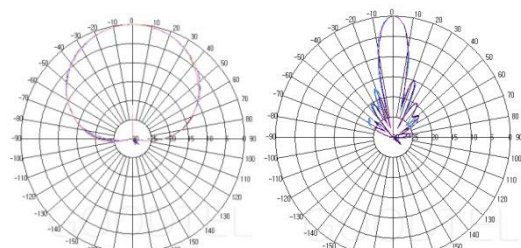
## Electrical Specifications

|                                |            |            |              |              |
|--------------------------------|------------|------------|--------------|--------------|
| Frequency Band                 |            | 790~960MHz | 1710~1880MHz | 1710~2170MHz |
| Gain                           |            | 15dBi      | 17.3dBi      | 16.6dBi      |
| Polarization                   |            | ±45°       |              |              |
| Half Power Beam width          | Horizontal | 65°        | 62°          | 35°          |
|                                | Vertical   | 13.5°      | 6.6°         | 14.5°        |
| Electrical Tilt                |            | 0°~10°     |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB       |              |              |
| Front-to-Back Ratio            |            | 25dB       |              |              |
| Isolation (Polarization)       |            | 30dB       | 30dB         | 27dB         |
| VSWR                           |            | 1.5:1      |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |              |              |
| Maximum Input Power(per port)  |            | 300W       |              |              |
| Impedance                      |            | 50Ω        |              |              |
| Cross Polar Ratio              | 0°         | 20dB       |              | -            |
|                                | ±60°       | 10dB       | 10dB         | -            |

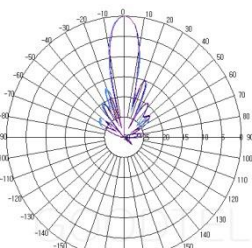
## Mechanical Specifications

|                      |       |                                                                                                                  |     |     |
|----------------------|-------|------------------------------------------------------------------------------------------------------------------|-----|-----|
| Dimension            | W/H/D | 265/2050/145mm                                                                                                   |     |     |
| Weight               |       | 17Kg                                                                                                             |     |     |
| Connector Type       |       | 790~960MHz : 2 x 4.3/10 Female<br>1710~1880MHz : 2 x 4.3/10 Female<br>1710~2170MHz(Dual Beam): 4 x 4.3/10 Female |     |     |
| Adjustment wheel     |       | 1EA                                                                                                              | 1EA | 2EA |
| Rated Wind Velocity  |       | 60m/s                                                                                                            |     |     |
| Radome Material      |       | ASA (prevent UV)                                                                                                 |     |     |
| Mechanical Down Tilt |       | 0° ~ 10°                                                                                                         |     |     |

Multi-band

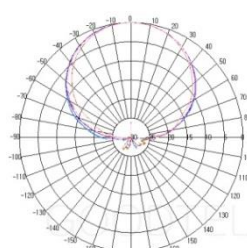


Horizontal

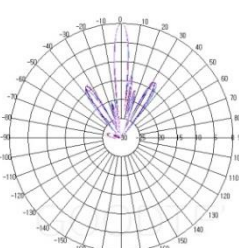


Vertical 0T

LOW

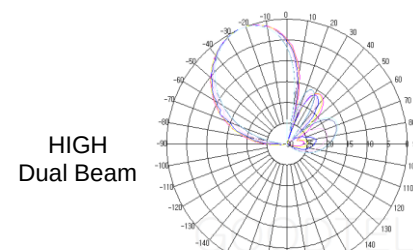


Horizontal

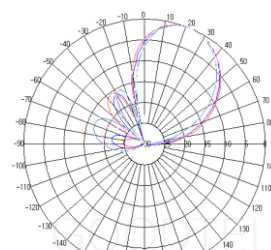


Vertical 0T

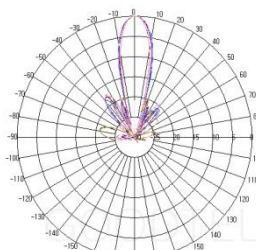
HIGH



Horizontal - Left



Horizontal - Right



Vertical 0T

HIGH  
Dual Beam



Install Configuration

# Product Specifications Sheet 4X series for BTS

**4XBD65HA35-1618V10D**

**1x790~960, 1x1710~1880MHz, 2x1710~2170MHz(Dual beam)  
Multi-band Dual Polarization and Dual Beam Antenna  
65°/35° Horizontal Beam Width, Variable Tilt**



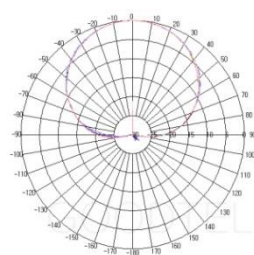
## Electrical Specifications

|                                |            |            |              |              |
|--------------------------------|------------|------------|--------------|--------------|
| Frequency Band                 |            | 790~960MHz | 1710~1880MHz | 1710~2170MHz |
| Gain                           |            | 16dBi      | 17.3dBi      | 17.8dBi      |
| Polarization                   |            | ±45°       |              |              |
| Half Power Beam width          | Horizontal | 65°        | 62°          | 35°          |
|                                | Vertical   | 10°        | 6.6°         | 11°          |
| Electrical Tilt                |            | 0°~10°     |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB       |              |              |
| Front-to-Back Ratio            |            | 25dB       |              |              |
| Isolation (Polarization)       |            | 30dB       | 30dB         | 27dB         |
| VSWR                           |            | 1.5:1      |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc    |              |              |
| Maximum Input Power(per port)  |            | 300W       |              |              |
| Impedance                      |            | 50Ω        |              |              |
| Cross Polar Ratio              | 0°         | 20dB       |              | -            |
|                                | ±60°       | 10dB       | 10dB         | -            |

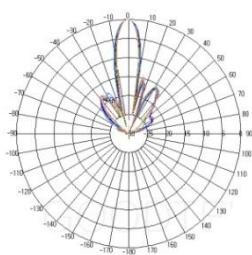
## Mechanical Specifications

|                      |       |                                                                                                                  |     |     |
|----------------------|-------|------------------------------------------------------------------------------------------------------------------|-----|-----|
| Dimension            | W/H/D | 265/2700/145mm                                                                                                   |     |     |
| Weight               |       | 22Kg                                                                                                             |     |     |
| Connector Type       |       | 790~960MHz : 2 x 4.3/10 Female<br>1710~1880MHz : 2 x 4.3/10 Female<br>1710~2170MHz(Dual Beam): 4 x 4.3/10 Female |     |     |
| Adjustment wheel     |       | 1EA                                                                                                              | 1EA | 2EA |
| Rated Wind Velocity  |       | 60m/s                                                                                                            |     |     |
| Radome Material      |       | ASA (prevent UV)                                                                                                 |     |     |
| Mechanical Down Tilt |       | 0° ~ 8°                                                                                                          |     |     |

Multi-band

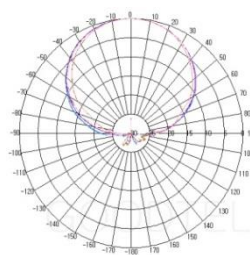


Horizontal

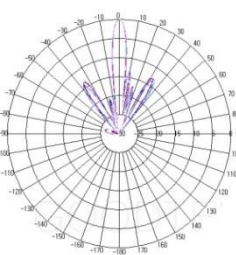


Vertical 0T

LOW

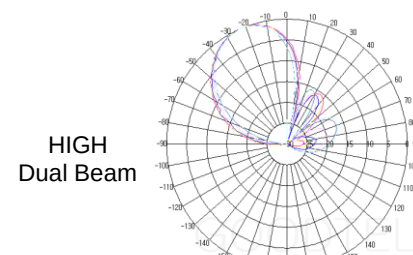


Horizontal

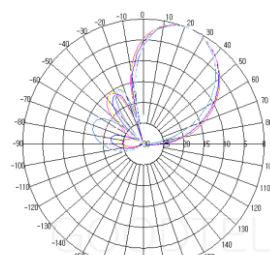


Vertical 0T

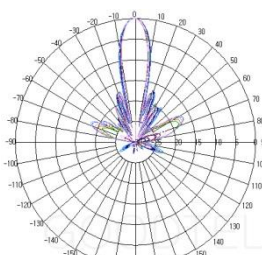
HIGH



Horizontal - Left



Horizontal - Right



Vertical 0T

HIGH  
Dual Beam



Install Configuration

# Product Specifications Sheet 6X series for BTS

**6XLRCHDE65-1517V1610DS**

**1 x 698~806MHz, 1 x 824~960MHz,  
2 x 1710~1880MHz, 2 x 2300~2400 MHz  
Multi-band Dual Polarization Antenna  
65° Horizontal Beam Width, Variable Tilt**

## Electrical Specifications

| Frequency Band(MHz)                        |            | 698~806   | 824~960 | 1710~1880 | 2300~2400 |
|--------------------------------------------|------------|-----------|---------|-----------|-----------|
| Gain(dBi)                                  |            | 14.5      | 15      | 16.5      | 16.5      |
| Polarization                               |            | ±45°      |         |           |           |
| Half Power Beam width                      | Horizontal | 68°       | 65°     | 65°       | 62°       |
|                                            | Vertical   | 15.0°     | 12.5°   | 7.5°      | 7.0°      |
| Electrical Tilt                            |            | 0° ~ 16°  |         | 0° ~ 10°  |           |
| Upper 1 <sup>st</sup> Sidelobe Suppression |            |           | 15dB    |           |           |
| Front-to-Back Ratio                        |            |           | 25dB    |           |           |
| VSWR                                       |            |           | 1.5:1   |           |           |
| Isolation                                  | Intra band | 25dB      |         |           |           |
|                                            | Inter band | 40dB      |         |           |           |
| Intermodulation IM3                        |            | 2 x 43dBm |         | -150dBc   |           |
| Maximum Input Power                        |            |           | 500W    |           | 250W      |
| Impedance                                  |            |           | 50Ω     |           |           |
| Cross Polar Ratio(dB)                      | 0°         | 15        | 15      | 18        | 18        |
|                                            | ±60°       | 9         | 9       | 8         | 8         |

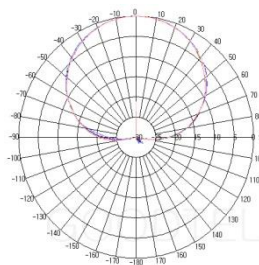
## Mechanical Specifications

|                          |                     |                              |  |
|--------------------------|---------------------|------------------------------|--|
| Dimension                | W/H/D               | 350/1600/200mm               |  |
| Weight (exclude bracket) |                     | 20Kg                         |  |
| Connector Type           | 698~806MHz :        | 1710~1880MHz :               |  |
|                          | 2 x 7/16 DIN Female | 4 x 7/16 DIN Female          |  |
|                          | 824~960MHz :        | 2300~2400MHz :               |  |
| Adjustment wheel         | 2 x 7/16 DIN Female | 4 x 7/16 DIN Female          |  |
|                          | 1EA                 | 2EA                          |  |
| Rated Wind Velocity      |                     | 60m/s                        |  |
| Radome Material          |                     | ASA + Glass 20% (prevent UV) |  |
| Mechanical Down Tilt     |                     | 0° ~ 10°                     |  |

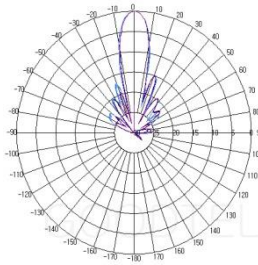
Multi-band



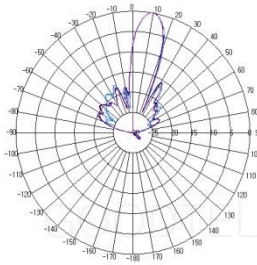
LOW



Horizontal

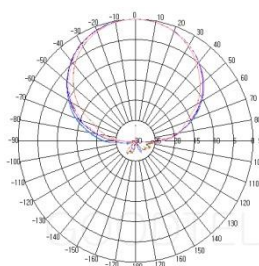


Vertical 0T

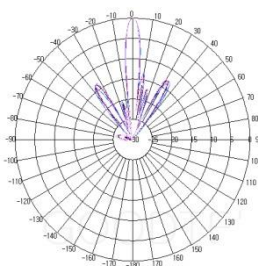


Vertical 10T

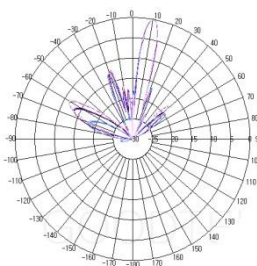
HIGH



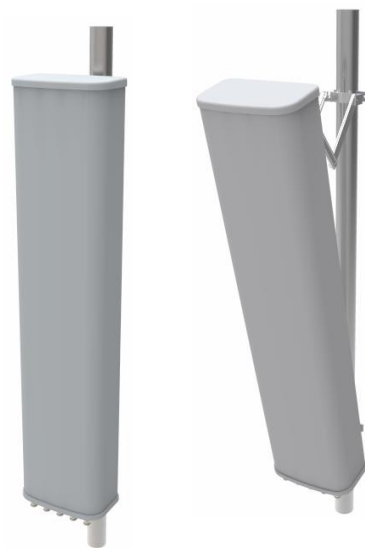
Horizontal



Vertical 0T



Vertical 10T



Install Configuration

## Small cell

| Small Cell |                       |      |             |           |                    |                   |      |
|------------|-----------------------|------|-------------|-----------|--------------------|-------------------|------|
| Type       | Frequency Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model             | Page |
| V-POL      | 1710~2170             | 1    | 80          | 7         | -                  | VHA80-07C         | 108  |
|            | 1885~2170             | 1    | 33          | 14        | 0                  | VHS33-14T0I       | 109  |
| X-POL      | 790~960               | 2    | 65          | 12        | 2/8                | XLB-12T*          | 110  |
|            | 1710~2170             | 2    | 65          | 15        | 2                  | XHA65-14.5T2      | 111  |
|            |                       | 2    | 65          | 15        | 8                  | XHA65-14.5T8      | 112  |
|            |                       | 2    | 65          | 14        | 2~12               | XHA65-14V10       | 113  |
|            |                       | 2    | 65          | 14        | 2                  | XHA65-14T2P       | 114  |
|            |                       | 2    | 65          | 14        | 8                  | XHA65-14T8P       | 115  |
|            |                       | 2    | 65          | 14        | 2                  | XHA65-14T2C       | 116  |
|            |                       | 2    | 65          | 14        | 8                  | XHA65-14T8C       | 117  |
|            |                       | 2    | 65          | 14        | 2~12               | XHA65-14V10       | 118  |
| XX-POL     | 1710~2170             | 4    | 65          | 15        | 2                  | XXHA65-15T2BC     | 119  |
|            | 1920~2400             | 4    | 25          | 15        | 0                  | XXHWE25-15T0      | 120  |
|            | 1920~2170/2300~2400   | 4    | 25          | 14/15     | 0                  | XXHWE25-1415T0DS  | 121  |
| 3X-POL     | 1920~2170/2300~2400   | 6    | 25          | 14/15     | 0                  | 3XH2WE25-1415T0DS | 122  |
|            | 1710~2170             | 6    | 65          | 12        | 2                  | 3XHA65-12T2T      | 123  |





Product Specifications Sheet V series for BTS

VHA80-07C

1710~2170MHz  
Broad Band Single Polarization  
80° Horizontal Beam Width, Cylindrical Antenna

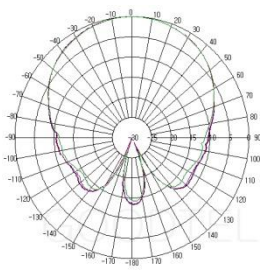


Electrical Specifications

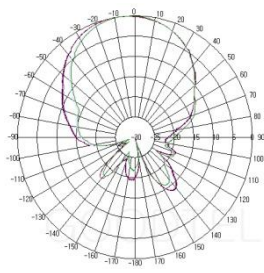
|                       |            |              |
|-----------------------|------------|--------------|
| Frequency Band        |            | 1710~2170MHz |
| Gain                  |            | 7dBi         |
| Polarization          |            | Vertical     |
| Half Power Beam width | Horizontal | 80°          |
|                       | Vertical   | 55°          |
| Front-to-Back Ratio   |            | 15dB         |
| VSWR                  |            | 1.5:1        |
| Intermodulation IM3   | 2 x 43dBm  | -140dBc      |
| Maximum Input Power   |            | 50W          |
| Impedance             |            | 50Ω          |

Mechanical Specifications

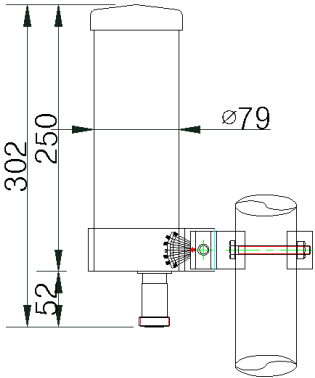
|                      |     |                  |
|----------------------|-----|------------------|
| Dimension            | Ø/H | Ø80/250mm        |
| Weight               |     | 0.8Kg            |
| Connector Type       |     | DIN Female × 1   |
| Radome Material      |     | ASA (prevent UV) |
| Mechanical Down Tilt |     | ± 0°~20°         |



Horizontal



Vertical



Install Configuration

V POL  
1700~2200MHz

Product Specifications Sheet V series for BTS

VHS33-14T0I

1885~2170MHz  
Broad band Single Polarization  
33° Horizontal Beam Width, Fixed Tilt



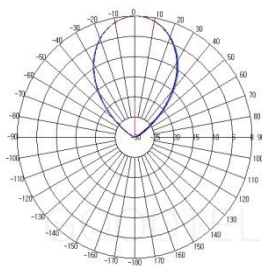
Electrical Specifications

|                       |            |              |
|-----------------------|------------|--------------|
| Frequency Band        |            | 1885~2170MHz |
| Gain                  |            | 14dBi        |
| Polarization          |            | Vertical     |
| Half Power Beam width | Horizontal | 33°          |
|                       | Vertical   | 33°          |
| Front-to-Back Ratio   |            | 35dB         |
| VSWR                  |            | 1.5:1        |
| Intermodulation IM3   | 2 x 43dBm  | -150dBc      |
| Maximum Input Power   |            | 200W         |
| Impedance             |            | 50Ω          |

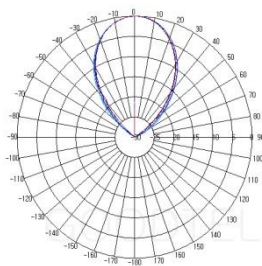
Mechanical Specifications

|                      |       |                          |
|----------------------|-------|--------------------------|
| Dimension            | W/H/D | 432/400/125mm            |
| Weight               |       | 4Kg                      |
| Connector Type       |       | 7/16 DIN Female & Bottom |
| Radome Material      |       | ASA (prevent UV)         |
| Mechanical Down Tilt |       | 0°~20°                   |

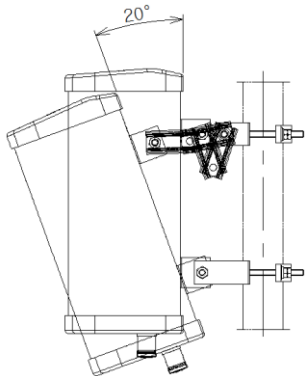
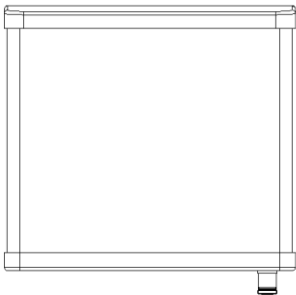
V POL  
1885~2170MHz



Horizontal



Vertical



Install Configuration

Product Specifications Sheet X series for BTS

XLB-12T2/T8

790~960MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt



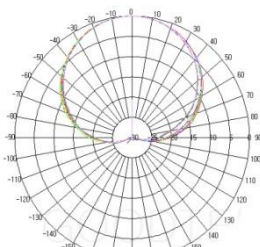
Electrical Specifications

|                         |            |         |
|-------------------------|------------|---------|
| Frequency Band          | 806~960MHz |         |
| Gain                    | 11.5 dBi   |         |
| Polarization            | ±45°       |         |
| Half Power Beam width   | Horizontal | 65°     |
|                         | Vertical   | 33°     |
| Electrical Tilt         | 2°, 8°,    |         |
| Front-to-Back Ratio     | 25dB       |         |
| Isolation between Ports | 30dB       |         |
| VSWR                    | 1.5:1      |         |
| Intermodulation IM3     | 2 x 43dBm  | -150dBc |
| Maximum Input Power     | 100W       |         |
| Impedance               | 50Ω        |         |
| Cross Polar Ratio       | 0°         | 20dB    |
|                         | ±60°       | 10dB    |
| Tracking                | 2dB        |         |
| Squint                  | ±2.5°      |         |

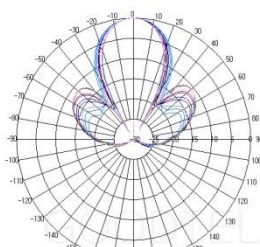
Mechanical Specifications

|                      |                              |               |
|----------------------|------------------------------|---------------|
| Dimension            | W/H/D                        | 265/570/115mm |
| Weight               | 3Kg                          |               |
| Connector Type       | 2 x 7/16 DIN Female & Bottom |               |
| Rated Wind Velocity  | 60m/s                        |               |
| Radome Material      | ASA (prevent UV)             |               |
| Mechanical Down Tilt | 0° ~ 20°                     |               |

X POL  
700~1000MHz



Horizontal



Vertical



Install Configuration

# Product Specifications Sheet X series for BTS

**XHA65-14.5T2**

**1710~2170MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Fixed Tilt**



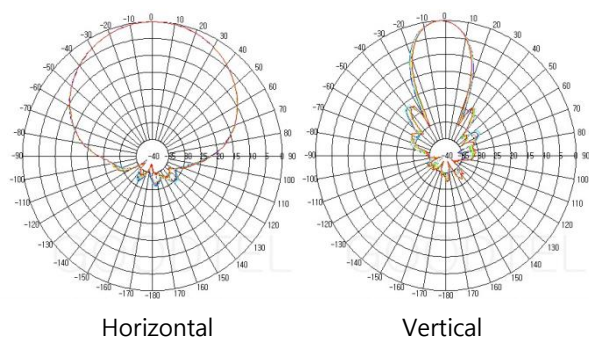
## Electrical Specifications

| Frequency Band             |            | 1710~1880MHz | 1920~2170MHz |
|----------------------------|------------|--------------|--------------|
| Gain                       |            | 14.1dBi      | 14.6dBi      |
| Polarization               |            |              | ±45°         |
| Half Power Beam width      | Horizontal |              | 65°          |
|                            | Vertical   | 22°          | 19.5°        |
| Electrical Tilt            |            |              | 2°           |
| Upper Sidelobe Suppression | 0°~60°     |              | 18dB         |
| Front-to-Back Ratio        |            |              | 25dB         |
| Isolation between Ports    |            |              | 27dB         |
| VSWR                       |            |              | 1.5:1        |
| Intermodulation IM3        | 2 x 43dBm  |              | -150dBc      |
| Maximum Input Power        |            |              | 200W         |
| Impedance                  |            |              | 50Ω          |
| Cross Polar Ratio          | 0°         |              | 20dB         |
|                            | ±60°       | 8dB          | 8dB          |
| Tracking                   |            |              | 2dB          |
| Squint                     |            |              | ±2.5°        |

## Mechanical Specifications

|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/H/D | 158/500/78mm                 |
| Weight (exclude bracket) |       | 3Kg                          |
| Connector Type           |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 20°                     |

X POL  
1700~2200MHz



Install Configuration

# Product Specifications Sheet X series for BTS

**XHA65-14.5T8**

**1710~2170MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Fixed Tilt**

## Electrical Specifications

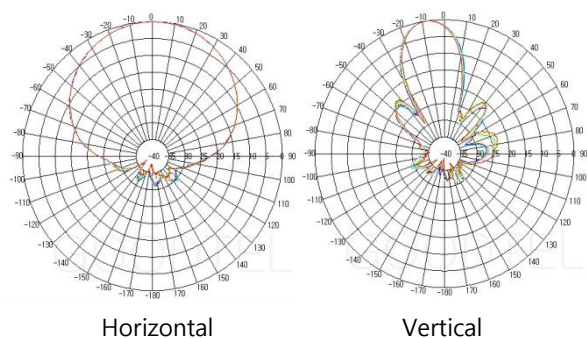
| Frequency Band             |            | 1710~1880MHz | 1920~2170MHz |
|----------------------------|------------|--------------|--------------|
| Gain                       |            | 14.0dBi      | 14.5dBi      |
| Polarization               |            |              | ±45°         |
| Half Power Beam width      | Horizontal |              | 65°          |
|                            | Vertical   | 22°          | 19.5°        |
| Electrical Tilt            |            |              | 8°           |
| Upper Sidelobe Suppression | 0°~60°     |              | 18dB         |
| Front-to-Back Ratio        |            |              | 25dB         |
| Isolation between Ports    |            |              | 27dB         |
| VSWR                       |            |              | 1.5:1        |
| Intermodulation IM3        | 2 x 43dBm  |              | -150dBc      |
| Maximum Input Power        |            |              | 200W         |
| Impedance                  |            |              | 50Ω          |
| Cross Polar Ratio          | 0°         |              | 20dB         |
|                            | ±60°       | 8dB          | 8dB          |
| Tracking                   |            |              | 2dB          |
| Squint                     |            |              | ±2.5°        |



## Mechanical Specifications

|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/H/D | 158/500/78mm                 |
| Weight (exclude bracket) |       | 3Kg                          |
| Connector Type           |       | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 20°                     |

X POL  
1700~2200MHz



Install Configuration



Product Specifications Sheet X series for BTS

XHA65-14V10

1710~2170MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt

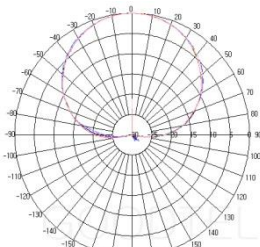


Electrical Specifications

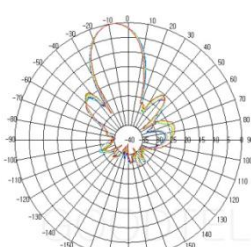
|                            |            |              |         |
|----------------------------|------------|--------------|---------|
| Frequency Band             |            | 1710~2170MHz |         |
| Gain                       |            | 13.5dBi      |         |
| Polarization               |            | ±45°         |         |
| Half Power Beam width      | Horizontal | 65°          |         |
|                            | Vertical   | 20°          |         |
| Electrical Tilt            |            | 2°~12°       |         |
| Upper Sidelobe Suppression |            | 0°~60°       | 18dB    |
| Front-to-Back Ratio        |            | 25dB         |         |
| Isolation between Ports    |            | 27dB         |         |
| VSWR                       |            | 1.5:1        |         |
| Intermodulation IM3        |            | 2 x 43dBm    | -150dBc |
| Maximum Input Power        |            | 300W         |         |
| Impedance                  |            | 50Ω          |         |
| Cross Polar Ratio          | 0°         | 20dB         |         |
|                            | ±60°       | 8dB          | 8dB     |
| Tracking                   |            | 2dB          |         |
| Squint                     |            | ±2.5°        |         |

Mechanical Specifications

|                          |       |                              |  |
|--------------------------|-------|------------------------------|--|
| Dimension                | W/D/H | 158/78/500mm                 |  |
| Weight (exclude bracket) |       | 3Kg                          |  |
| Connector Type           |       | 2 x 7/16 DIN Female & Bottom |  |
| Rated Wind Velocity      |       | 60m/s                        |  |
| Radome Material          |       | ASA (prevent UV)             |  |
| Mechanical Down Tilt     |       | 0° ~ 20°                     |  |



Horizontal



Vertical



Install Configuration

X POL  
1700~2200MHz

# Product Specifications Sheet X series for BTS

**XHA65-14T2P**

**1710~2170MHz**

**Broad Band Dual Polarization**

**65° Horizontal Beam Width, Fixed Tilt**

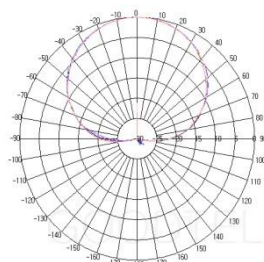
## Electrical Specifications

|                            |            |              |     |
|----------------------------|------------|--------------|-----|
| Frequency Band             |            | 1710~2170MHz |     |
| Gain                       |            | 13.5dBi      |     |
| Polarization               |            | ±45°         |     |
| Half Power Beam width      | Horizontal | 65°          |     |
|                            | Vertical   | 20°          |     |
| Electrical Tilt            |            | 2°           |     |
| Upper Sidelobe Suppression | 0°~60°     | 18dB         |     |
| Front-to-Back Ratio        |            | 25dB         |     |
| Isolation between Ports    |            | 27dB         |     |
| VSWR                       |            | 1.5:1        |     |
| Intermodulation IM3        | 2 x 43dBm  | -150dBc      |     |
| Maximum Input Power        |            | 300W         |     |
| Impedance                  |            | 50Ω          |     |
| Cross Polar Ratio          | 0°         | 20dB         |     |
|                            | ±60°       | 8dB          | 8dB |
| Tracking                   |            | 2dB          |     |
| Squint                     |            | ±2.5°        |     |

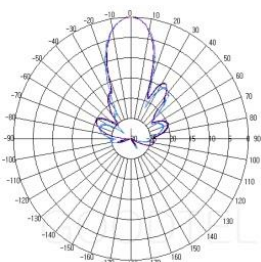
## Mechanical Specifications

|                          |                              |           |
|--------------------------|------------------------------|-----------|
| Dimension                | Ø/H                          | 120/500mm |
| Weight (exclude bracket) | 3Kg                          |           |
| Connector Type           | 2 x 7/16 DIN Female & Bottom |           |
| Rated Wind Velocity      | 60m/s                        |           |
| Radome Material          | ASA (prevent UV)             |           |
| Mechanical Down Tilt     | 0° ~ 20°                     |           |

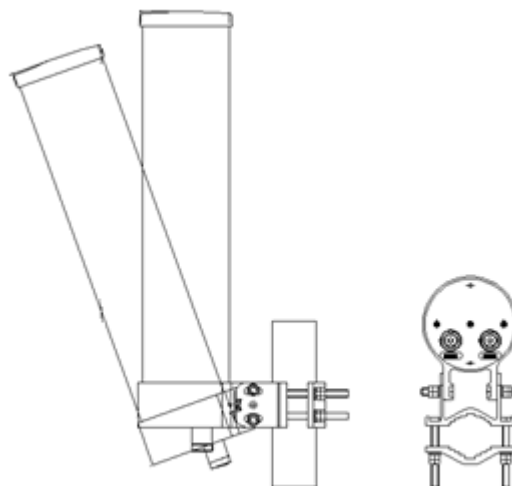
X POL  
1700~2200MHz



Horizontal



Vertical



Install Configuration

Product Specifications Sheet X series for BTS

XHA65-14T8P

1710~2170MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt



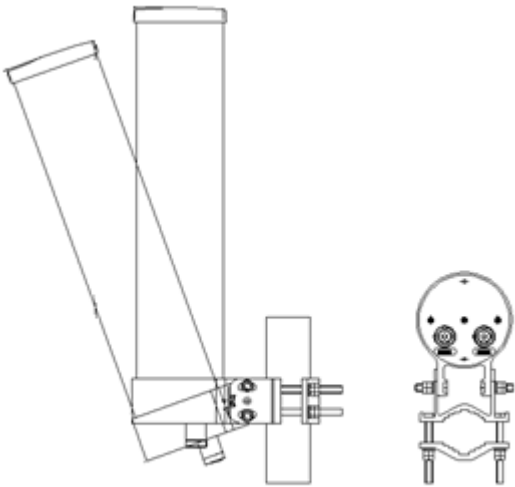
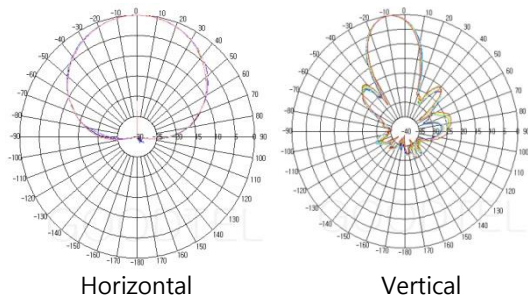
Electrical Specifications

|                            |            |              |         |
|----------------------------|------------|--------------|---------|
| Frequency Band             |            | 1710~2170MHz |         |
| Gain                       |            | 13.5dBi      |         |
| Polarization               |            | ±45°         |         |
| Half Power Beam width      | Horizontal | 65°          |         |
|                            | Vertical   | 20°          |         |
| Electrical Tilt            |            | 8°           |         |
| Upper Sidelobe Suppression |            | 0°~60°       | 18dB    |
| Front-to-Back Ratio        |            | 25dB         |         |
| Isolation between Ports    |            | 27dB         |         |
| VSWR                       |            | 1.5:1        |         |
| Intermodulation IM3        |            | 2 x 43dBm    | -150dBc |
| Maximum Input Power        |            | 300W         |         |
| Impedance                  |            | 50Ω          |         |
| Cross Polar Ratio          | 0°         | 20dB         |         |
|                            | ±60°       | 8dB          | 8dB     |
| Tracking                   |            | 2dB          |         |
| Squint                     |            | ±2.5°        |         |

Mechanical Specifications

|                          |     |                              |  |
|--------------------------|-----|------------------------------|--|
| Dimension                | Ø/H | 120/500mm                    |  |
| Weight (exclude bracket) |     | 3Kg                          |  |
| Connector Type           |     | 2 x 7/16 DIN Female & Bottom |  |
| Rated Wind Velocity      |     | 60m/s                        |  |
| Radome Material          |     | ASA (prevent UV)             |  |
| Mechanical Down Tilt     |     | 0° ~ 20°                     |  |

X POL  
1700~2200MHz



Install Configuration

Product Specifications Sheet X series for BTS

XHA65-14T2C

1710~2170MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt



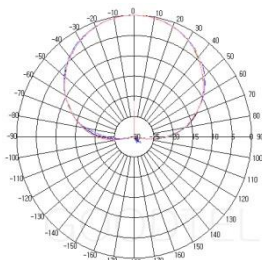
Electrical Specifications

|                            |            |              |         |
|----------------------------|------------|--------------|---------|
| Frequency Band             |            | 1710~2170MHz |         |
| Gain                       |            | 13.5dBi      |         |
| Polarization               |            | ±45°         |         |
| Half Power Beam width      | Horizontal | 65°          |         |
|                            | Vertical   | 20°          |         |
| Electrical Tilt            |            | 2°           |         |
| Upper Sidelobe Suppression |            | 0°~60°       | 18dB    |
| Front-to-Back Ratio        |            | 25dB         |         |
| Isolation between Ports    |            | 27dB         |         |
| VSWR                       |            | 1.5:1        |         |
| Intermodulation IM3        |            | 2 x 43dBm    | -150dBc |
| Maximum Input Power        |            | 300W         |         |
| Impedance                  |            | 50Ω          |         |
| Cross Polar Ratio          | 0°         | 20dB         |         |
|                            | ±60°       | 8dB          | 8dB     |
| Tracking                   |            | 2dB          |         |
| Squint                     |            | ±2.5°        |         |

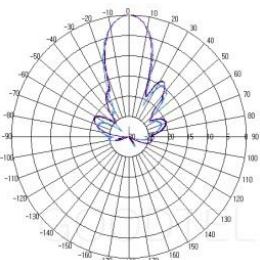
Mechanical Specifications

|                          |     |                              |  |
|--------------------------|-----|------------------------------|--|
| Dimension                | Ø/H | 125/500mm                    |  |
| Weight (exclude bracket) |     | 3Kg                          |  |
| Connector Type           |     | 2 x 7/16 DIN Female & Bottom |  |
| Rated Wind Velocity      |     | 60m/s                        |  |
| Radome Material          |     | ASA (prevent UV)             |  |
| Mechanical Down Tilt     |     | 0° ~ 20°                     |  |

X POL  
1700~2200MHz



Horizontal



Vertical



Install Configuration

Product Specifications Sheet X series for BTS

XHA65-14T8C

1710~2170MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt



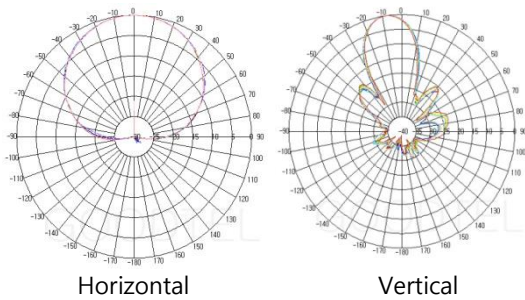
Electrical Specifications

|                            |            |              |         |
|----------------------------|------------|--------------|---------|
| Frequency Band             |            | 1710~2170MHz |         |
| Gain                       |            | 13.5dBi      |         |
| Polarization               |            | ±45°         |         |
| Half Power Beam width      | Horizontal | 65°          |         |
|                            | Vertical   | 20°          |         |
| Electrical Tilt            |            | 8°           |         |
| Upper Sidelobe Suppression |            | 0°~60°       | 18dB    |
| Front-to-Back Ratio        |            | 25dB         |         |
| Isolation between Ports    |            | 27dB         |         |
| VSWR                       |            | 1.5:1        |         |
| Intermodulation IM3        |            | 2 x 43dBm    | -150dBc |
| Maximum Input Power        |            | 300W         |         |
| Impedance                  |            | 50Ω          |         |
| Cross Polar Ratio          | 0°         | 20dB         |         |
|                            | ±60°       | 8dB          | 8dB     |
| Tracking                   |            | 2dB          |         |
| Squint                     |            | ±2.5°        |         |

Mechanical Specifications

|                          |     |                              |  |
|--------------------------|-----|------------------------------|--|
| Dimension                | Ø/H | 125/500mm                    |  |
| Weight (exclude bracket) |     | 3Kg                          |  |
| Connector Type           |     | 2 x 7/16 DIN Female & Bottom |  |
| Rated Wind Velocity      |     | 60m/s                        |  |
| Radome Material          |     | ASA (prevent UV)             |  |
| Mechanical Down Tilt     |     | 0° ~ 20°                     |  |

X POL  
1700~2200MHz



Install Configuration



Product Specifications Sheet X series for BTS

XHA65-14V10C

1710~2170MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt



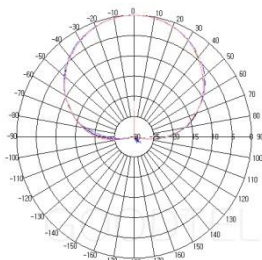
Electrical Specifications

|                            |            |              |         |
|----------------------------|------------|--------------|---------|
| Frequency Band             |            | 1710~2170MHz |         |
| Gain                       |            | 13.5dBi      |         |
| Polarization               |            | ±45°         |         |
| Half Power Beam width      | Horizontal | 65°          |         |
|                            | Vertical   | 20°          |         |
| Electrical Tilt            |            | 2°~12°       |         |
| Upper Sidelobe Suppression |            | 0°~60°       | 18dB    |
| Front-to-Back Ratio        |            | 25dB         |         |
| Isolation between Ports    |            | 27dB         |         |
| VSWR                       |            | 1.5:1        |         |
| Intermodulation IM3        |            | 2 x 43dBm    | -150dBc |
| Maximum Input Power        |            | 300W         |         |
| Impedance                  |            | 50Ω          |         |
| Cross Polar Ratio          | 0°         | 20dB         |         |
|                            | ±60°       | 8dB          | 8dB     |
| Tracking                   |            | 2dB          |         |
| Squint                     |            | ±2.5°        |         |

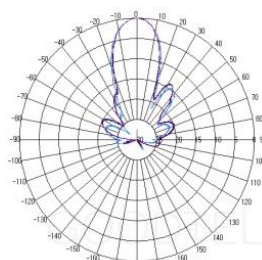
Mechanical Specifications

|                          |     |                              |  |
|--------------------------|-----|------------------------------|--|
| Dimension                | Ø/H | 125/500mm                    |  |
| Weight (exclude bracket) |     | 3Kg                          |  |
| Connector Type           |     | 2 x 7/16 DIN Female & Bottom |  |
| Rated Wind Velocity      |     | 60m/s                        |  |
| Radome Material          |     | ASA (prevent UV)             |  |
| Mechanical Down Tilt     |     | 0° ~ 20°                     |  |

X POL  
1700~2200MHz



Horizontal



Vertical



Install Configuration

Product Specifications Sheet XX series for BTS

XXHA65-15T2BC

1710~2170MHz  
Broad Band Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt, Azimuth Swing



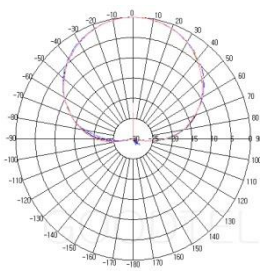
Electrical Specifications

|                                     |              |         |
|-------------------------------------|--------------|---------|
| Frequency Band                      | 1710~2170MHz |         |
| Gain                                | 15dBi        |         |
| Polarization                        | ±45°         |         |
| Half Power Beam width               | Horizontal   | 65°     |
|                                     | Vertical     | 14°     |
| Electrical Tilt                     | 2°           |         |
| Upper 1st Sidelobe Suppression      | 15dB         |         |
| Front-to-Back Ratio                 | 25dB         |         |
| Isolation between Ports             | 25dB         |         |
| VSWR                                | 1.5:1        |         |
| Intermodulation IM3                 | 2 x 43dBm    | -150dBc |
| Maximum Input Power                 | 150W         |         |
| Impedance                           | 50Ω          |         |
| Cross Polar Ratio                   | 0°           | 15dB    |
|                                     | ±60°         | -       |
| Tilt acceptable error range(squint) | ±2°          |         |

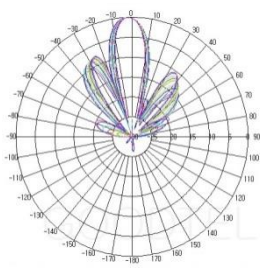
Mechanical Specifications

|                     |                            |            |
|---------------------|----------------------------|------------|
| Dimension           | Ø/H                        | Ø200*800mm |
| Weight              | 7Kg                        |            |
| Connector Type      | 4*7/16 DIN Female & Bottom |            |
| Rated Wind Velocity | 60m/s                      |            |
| Radome Material     | ASA (prevent UV)           |            |
| Azimuth Swing Angle | 10°~ -25°, -10°~ 25°       |            |

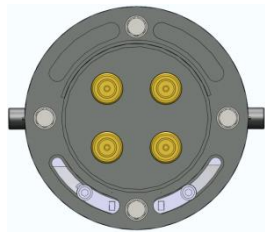
XX POL  
1700~2200MHz



Horizontal



Vertical 2T



Install Configuration

Product Specifications Sheet XX series for BTS

XXHWE25-15T0

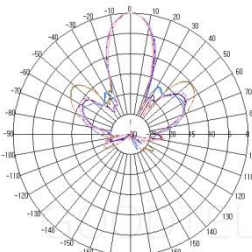
1920~2400MHz  
Multi-band Dual Polarization, Fixed Tilt  
25° Horizontal Beam Width, High Rise Building Coverage

Electrical Specifications

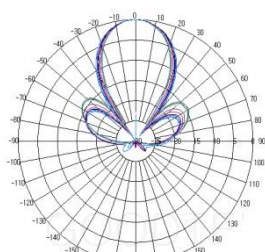
| Frequency Band          |            | 1920~2170MHz | 2300~2400MHz |
|-------------------------|------------|--------------|--------------|
| Gain                    |            | 14dBi        | 15dBi        |
| Polarization            |            | ±45°         |              |
| Half Power Beam width   | Horizontal | 29°          | 26°          |
|                         | Vertical   | 40°          | 35°          |
| Front-to-Back Ratio     |            | 25dB         |              |
| Isolation between Ports |            | 30dB         |              |
| VSWR                    |            | 1.5:1        |              |
| Intermodulation IM3     | 2 x 43dBm  | -150dBc      |              |
| Maximum Input Power     |            | 200W         |              |
| Impedance               |            | 50Ω          |              |
| Cross Polar Ratio       | 0°         | 18dB         | 18dB         |

Mechanical Specifications

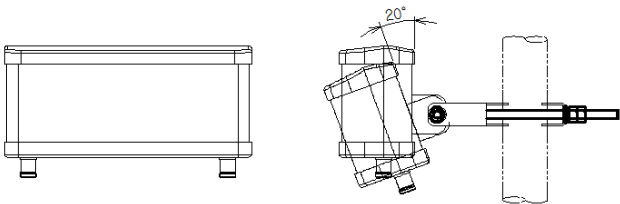
|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/H/D | 520/250/170mm                |
| Weight (exclude bracket) |       | 4.5Kg                        |
| Connector Type           |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 20°                     |



Horizontal



Vertical



Install Configuration

Multi-band

# Product Specifications Sheet XX series for BTS

XXHWE25-1415T0DS

1920~2170MHz / 2300~2400MHz

Multi-band Dual Polarization, Fixed Tilt

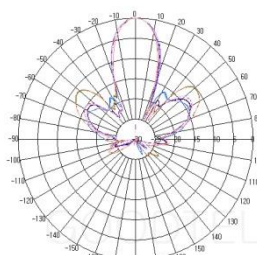
25° Horizontal Beam Width, High Rise Building Coverage

## Electrical Specifications

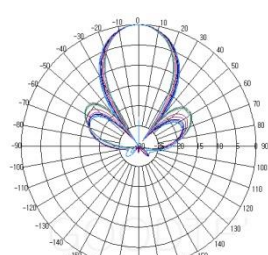
| Frequency Band          |            | 1920~2170MHz | 2300~2400MHz |
|-------------------------|------------|--------------|--------------|
| Gain                    |            | 14dBi        | 15dBi        |
| Polarization            |            | ±45°         |              |
| Half Power Beam width   | Horizontal | 25°          | 22°          |
|                         | Vertical   | 40°          | 35°          |
| Front-to-Back Ratio     |            | 25dB         |              |
| Isolation between Ports |            | 30dB         |              |
| VSWR                    |            | 1.5:1        |              |
| Intermodulation IM3     | 2 x 43dBm  | -150dBc      |              |
| Maximum Input Power     |            | 200W         |              |
| Impedance               |            | 50Ω          |              |
| Cross Polar Ratio       | 0°         | 18dB         | 18dB         |

## Mechanical Specifications

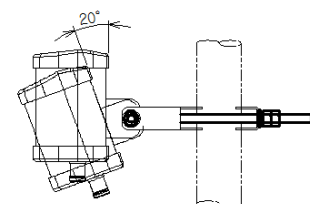
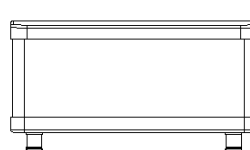
|                          |                              |                              |
|--------------------------|------------------------------|------------------------------|
| Dimension                | W/H/D                        | 432/250/125mm                |
| Weight (exclude bracket) |                              | 4Kg                          |
| Connector Type           | 2 x 7/16 DIN Female & Bottom | 2 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |                              | 60m/s                        |
| Radome Material          |                              | ASA (prevent UV)             |
| Mechanical Down Tilt     |                              | 0° ~ 20°                     |



Horizontal



Vertical



Install Configuration

Multi-band

# Product Specifications Sheet XX series for BTS

3XH2WE25-1415T0DS

2 X 1920~2170MHz / 2300~2400MHz

Multi-band Dual Polarization, Fixed Tilt

25° Horizontal Beam Width, High Rise Building Coverage

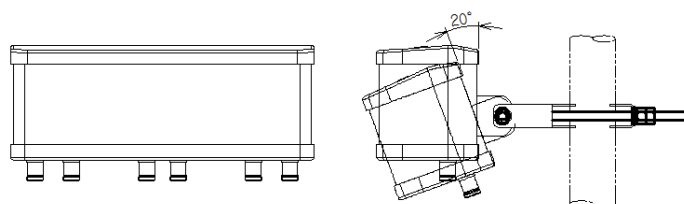
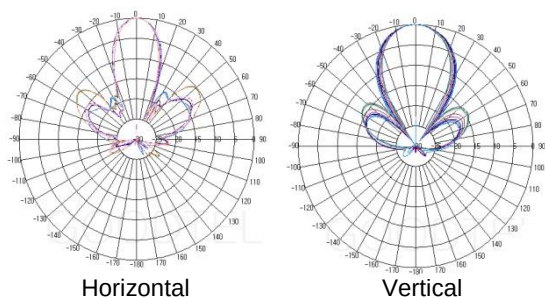
## Electrical Specifications

| Frequency Band          |            | 1920~2170MHz | 2300~2400MHz |
|-------------------------|------------|--------------|--------------|
| Gain                    |            | 14dBi        | 15dBi        |
| Polarization            |            | ±45°         |              |
| Half Power Beam width   | Horizontal | 25°          | 22°          |
|                         | Vertical   | 40°          | 35°          |
| Front-to-Back Ratio     |            | 25dB         |              |
| Isolation between Ports |            | 30dB         |              |
| VSWR                    |            | 1.5:1        |              |
| Intermodulation IM3     |            | 2 x 43dBm    | -150dBc      |
| Maximum Input Power     |            | 200W         |              |
| Impedance               |            | 50Ω          |              |
| Cross Polar Ratio       |            | 0° 18dB      | 18dB         |

## Mechanical Specifications

|                          |                                 |                                 |
|--------------------------|---------------------------------|---------------------------------|
| Dimension                | W/H/D                           | 520/250/170mm                   |
| Weight (exclude bracket) |                                 | 4.5Kg                           |
| Connector Type           | 4 x 7/16 DIN<br>Female & Bottom | 2 x 7/16 DIN<br>Female & Bottom |
| Rated Wind Velocity      |                                 | 60m/s                           |
| Radome Material          |                                 | ASA (prevent UV)                |
| Mechanical Down Tilt     |                                 | 0° ~ 20°                        |

Multi-band



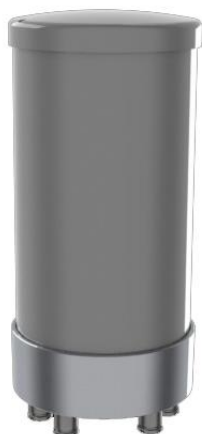
Install Configuration



# Product Specifications Sheet 3X series for BTS

**3XHA65-12T2T**

**3 X 1710~2170MHz  
Tri-sector Dual Polarization  
65° Horizontal Beam Width, Fixed Tilt**



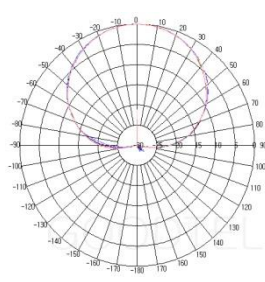
## Electrical Specifications

|                         |                |         |
|-------------------------|----------------|---------|
| Frequency Band          | 1710 ~ 2170MHz |         |
| Gain                    | 11.5 dBi       |         |
| Polarization            | ±45°           |         |
| Half Power Beam width   | Horizontal     | 65°     |
|                         | Vertical       | 33°     |
| Electrical Tilt         | 2°             |         |
| Front-to-Back Ratio     | 25dB           |         |
| Isolation between Ports | 27dB           |         |
| VSWR                    | 1.5:1          |         |
| Intermodulation IM3     | 2 x 43dBm      | -140dBc |
| Maximum Input Power     | 100W           |         |
| Impedance               | 50Ω            |         |
| Cross Polar Ratio       | 0°             | 20dB    |
|                         | ±60°           | 10dB    |
| Tracking                | 2dB            |         |
| Squint                  | ±2°            |         |

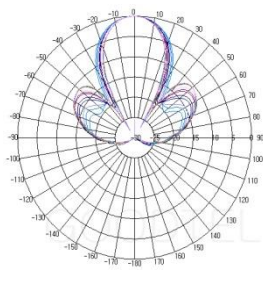
## Mechanical Specifications

|                     |                              |           |
|---------------------|------------------------------|-----------|
| Dimension           | Ø/H                          | 200/370mm |
| Weight              | 4Kg                          |           |
| Connector Type      | 6 x 7/16 DIN Female & Bottom |           |
| Rated Wind Velocity | 60m/s                        |           |
| Radome Material     | ASA (prevent UV)             |           |

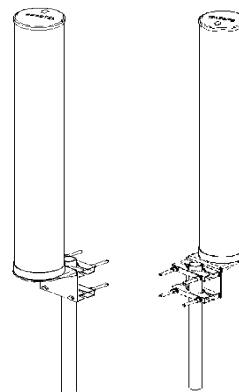
3X POL  
1700~2200MHz



Horizontal



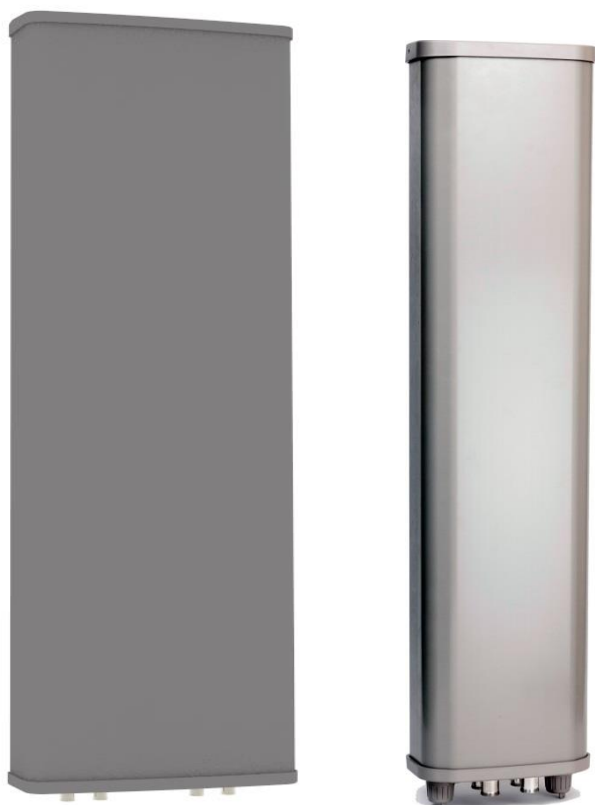
Vertical



Install Configuration

## Multi Beam

| Multi Beam |                       |      |             |           |                    |                 |      |
|------------|-----------------------|------|-------------|-----------|--------------------|-----------------|------|
| Type       | Frequency Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model           | Page |
| XX-POL     | 790~960               | 4    | 35          | 18        | 0~10               | XXLB35-18V10D   | 125  |
|            | 1710~2170             | 4    | 35          | 20        | 2~8                | XXHA35-20V8D    | 126  |
|            | 2300~2400             | 4    | 35          | 19        | 0~10               | XXHE35-19V10D   | 127  |
| 4X-POL     | 790~960/1710~2170     | 8    | 35          | 17/18     | 0~10               | 4XBA35-1718V10D | 128  |
|            | 790~960/1710~2170     | 8    | 35          | 18        | 0~10               | 4XBA35-18V10D   | 129  |



# Product Specifications Sheet XX series for BTS

XXLB35-18V10D

790~960MHz

Dual Polarization Dual Beam Antenna

35° Horizontal Beam Width, Variable Tilt

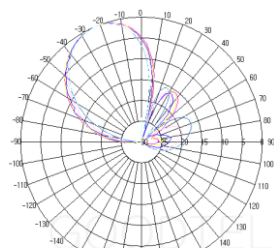
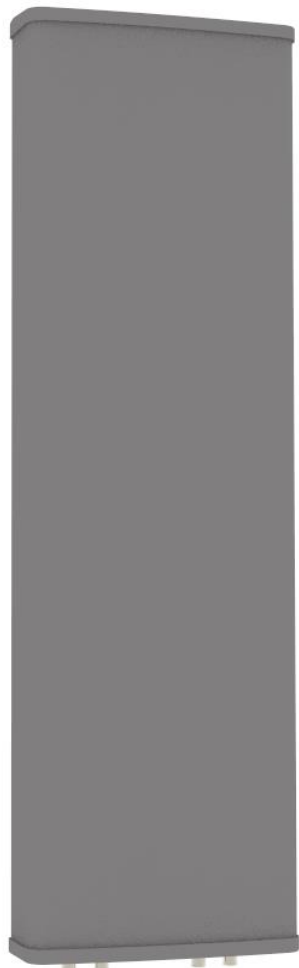
## Electrical Specifications

| Frequency Band             |            | 790~894MHz | 890~960MHz |
|----------------------------|------------|------------|------------|
| Gain                       |            | 17dBi      | 17.8dBi    |
| Polarization               |            | ±45°       |            |
| Half Power Beam width      | Horizontal | 37°        | 35°        |
|                            | Vertical   | 13°        | 11°        |
| Electrical Tilt            |            | 0° ~ 10°   |            |
| Upper Sidelobe Suppression |            | 18dB       |            |
| Front-to-Back Ratio        |            | 30dB       |            |
| Isolation (Polarization)   |            | 27dB       |            |
| VSWR                       |            | 1.5:1      |            |
| Intermodulation IM3        |            | 2 x 43dBm  | -150dBc    |
| Maximum Input Power        |            | 300W       |            |
| Impedance                  |            | 50Ω        |            |
| Beam Isolation             |            | 15dB       |            |

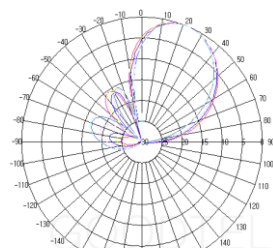
## Mechanical Specifications

|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/H/D | 520/1730/170mm               |
| Weight (exclude bracket) |       | 20Kg                         |
| Connector Type           |       | 4 x 7/16 DIN Female & Bottom |
| Adjustment wheel         |       | 2EA                          |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 10°                     |

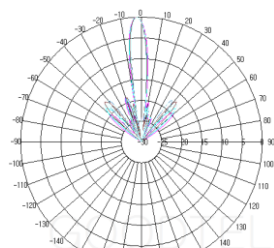
XX POL  
700~1000MHz



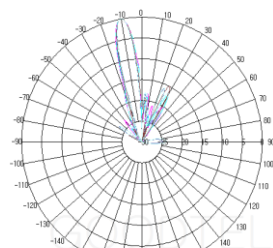
Horizontal - Left



Horizontal - Right



Vertical 2T



Vertical 10T



Install Configuration

# Product Specifications Sheet XX series for BTS

**XXHA35-20V8D**

**1710~2170MHz**

**Dual Polarization Dual Beam Antenna**

**35° Horizontal Beam Width, Variable Tilt**



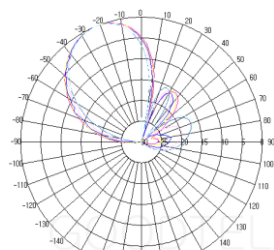
## Electrical Specifications

| Frequency Band                                        |                    | 1710~1880MHz | 1920~2170MHz |
|-------------------------------------------------------|--------------------|--------------|--------------|
| Gain                                                  |                    | 19.3dBi      | 19.8dBi      |
| Polarization                                          |                    | ±45°         |              |
| Half Power Beam width                                 | Horizontal         | 37°          | 35°          |
|                                                       | Vertical           | 7°           | 6°           |
| Electrical Tilt                                       |                    | 2° ~ 10°     |              |
| Upper Sidelobe Suppression<br>(Electrical tilt 4°~8°) | Beam peak<br>~ 60° | 17dB         |              |
| Front-to-Back Ratio                                   |                    | 30dB         |              |
| Isolation (Polarization)                              |                    | 30dB         |              |
| VSWR                                                  |                    | 1.5:1        |              |
| Intermodulation IM3                                   | 2 x 43dBm          | -150dBc      |              |
| Maximum Input Power                                   |                    | 200W         |              |
| Impedance                                             |                    | 50Ω          |              |
| Beam Isolation                                        |                    | 15dB         |              |
| Tracking                                              |                    | -            |              |
| Squint                                                |                    | ±2.5°        |              |

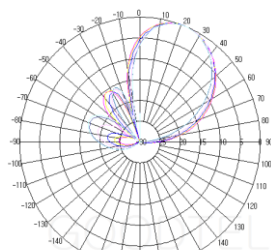
## Mechanical Specifications

|                          |       |                              |
|--------------------------|-------|------------------------------|
| Dimension                | W/H/D | 265/1500/115mm               |
| Weight (exclude bracket) |       | 11Kg                         |
| Connector Type           |       | 4 x 7/16 DIN Female & Bottom |
| Rated Wind Velocity      |       | 60m/s                        |
| Radome Material          |       | ASA (prevent UV)             |
| Mechanical Down Tilt     |       | 0° ~ 20°                     |

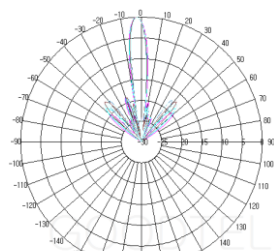
XX POL  
1700~2200MHz



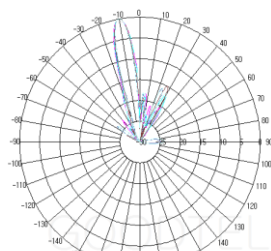
Horizontal - Left



Horizontal - Right



Vertical 2T



Vertical 10T



Install Configuration

# Product Specifications Sheet XX series for BTS

**XXHE35-19V10D**

**2300~2400MHz**

**Dual Polarization Dual Beam Antenna**

**35° Horizontal Beam Width, Variable Tilt**

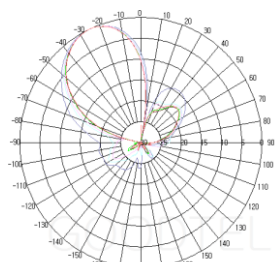


## Electrical Specifications

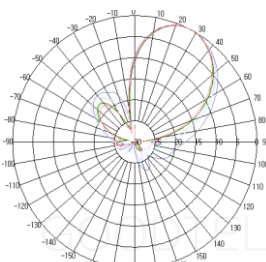
|                                            |              |         |
|--------------------------------------------|--------------|---------|
| Frequency Band                             | 2300~2400MHz |         |
| Gain                                       | 19dBi        |         |
| Polarization                               | ±45°         |         |
| Half Power Beam width                      | Horizontal   | 33°     |
|                                            | Vertical     | 7°      |
| Electrical Tilt                            | 0° ~ 10°     |         |
| Upper 1 <sup>st</sup> Sidelobe Suppression | 15dB         |         |
| Front-to-Back Ratio                        | 25dB         |         |
| Isolation (Polarization)                   | 30dB         |         |
| VSWR                                       | 1.5:1        |         |
| Intermodulation IM3                        | 2 x 43dBm    | -150dBc |
| Maximum Input Power                        | 200W         |         |
| Impedance                                  | 50Ω          |         |
| Beam Isolation                             | 15dB         |         |

## Mechanical Specifications

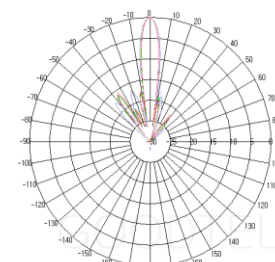
|                          |                              |                |
|--------------------------|------------------------------|----------------|
| Dimension                | W/H/D                        | 265/1400/115mm |
| Weight (exclude bracket) | 10.5Kg                       |                |
| Connector Type           | 4 x 7/16 DIN Female & Bottom |                |
| Adjustment wheel         | 2EA                          |                |
| Rated Wind Velocity      | 60m/s                        |                |
| Radome Material          | ASA (prevent UV)             |                |
| Mechanical Down Tilt     | 0° ~ 20°                     |                |



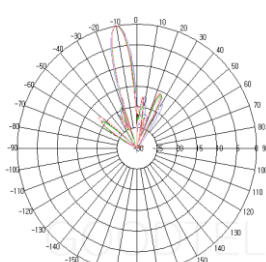
Horizontal - Left



Horizontal - Right



Vertical 0T



Vertical 10T



Install Configuration

XX POL  
1900~2400MHz



# Product Specifications Sheet 4X series for BTS

4XBA35-1718V10D

2 x 790~960, 2 x 1710~2170MHz

Multi-band Dual Polarization Dual Beam Antenna

35° Horizontal Beam Width, Variable Tilt



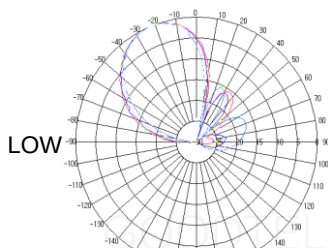
## Electrical Specifications

| Frequency Band(MHz)                        |            | 790~894 | 890~960  | 1710~1880 | 1920~2170 |
|--------------------------------------------|------------|---------|----------|-----------|-----------|
| Gain                                       |            | 16.5    | 17.3     | 17.2      | 18        |
| Polarization                               |            | ±45°    |          |           |           |
| Half Power Beam width                      | Horizontal | 37°     | 35°      | 37°       | 34°       |
|                                            | Vertical   | 14°     | 13°      | 11.5°     | 10°       |
| Electrical Tilt                            |            |         | 0° ~ 10° |           |           |
| Upper 1 <sup>st</sup> Sidelobe Suppression |            |         | 17dB     |           |           |
| Front-to-Back Ratio                        |            |         | 30dB     |           |           |
| Isolation (Polarization)                   |            |         | 27dB     | 30dB      |           |
| VSWR                                       |            |         | 1.5:1    |           |           |
| Intermodulation IM3                        | 2 x 43dBm  | -150dBc |          |           |           |
| Maximum Input Power                        |            |         | 300W     | 200W      |           |
| Impedance                                  |            |         | 50Ω      |           |           |
| Beam Isolation                             |            |         | 15dB     |           |           |

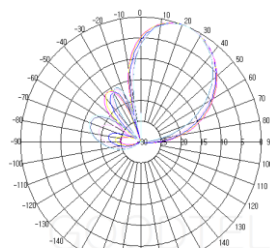
## Mechanical Specifications

|                          |       |                                                                        |
|--------------------------|-------|------------------------------------------------------------------------|
| Dimension                | W/H/D | 520/2200/170mm                                                         |
| Weight (exclude bracket) |       | 28Kg                                                                   |
| Connector Type           |       | 790~960MHz : 4 x 7/16 DIN Female<br>1710~2170MHz : 4 x 7/16 DIN Female |
| Adjustment wheel         | 2EA   | 2EA                                                                    |
| Rated Wind Velocity      |       | 60m/s                                                                  |
| Radome Material          |       | ASA (prevent UV)                                                       |
| Mechanical Down Tilt     |       | 0° ~ 6°                                                                |

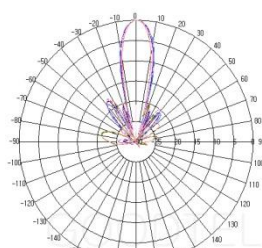
Multi-band



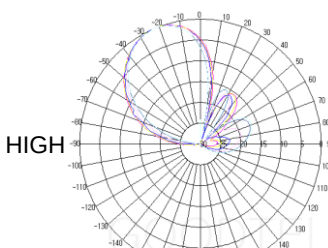
Horizontal - Left



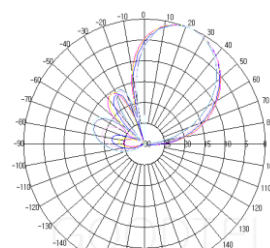
Horizontal - Right



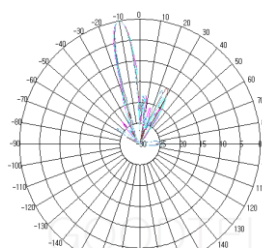
Vertical 0T



Horizontal - Left



Horizontal - Right



Vertical 10T



Install Configuration

# Product Specifications Sheet 4X series for BTS

**4XBA35-18V10D**

**2 x 790~960, 2 x 1710~2170MHz**

**Multi-band Dual Polarization Dual Beam Antenna**

**35° Horizontal Beam Width, Variable Tilt**



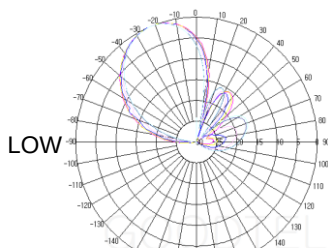
## Electrical Specifications

| Frequency Band(MHz)                        |            | 790~894  | 890~960 | 1710~1880 | 1920~2170 |
|--------------------------------------------|------------|----------|---------|-----------|-----------|
| Gain                                       |            | 17       | 17.8    | 17.2      | 18        |
| Polarization                               |            | ±45°     |         |           |           |
| Half Power Beam width                      | Horizontal | 37°      | 35°     | 37°       | 34°       |
|                                            | Vertical   | 12°      | 10.5°   | 11.5°     | 10°       |
| Electrical Tilt                            |            | 0° ~ 10° |         |           |           |
| Upper 1 <sup>st</sup> Sidelobe Suppression |            | 17dB     |         |           |           |
| Front-to-Back Ratio                        |            | 30dB     |         |           |           |
| Isolation (Polarization)                   |            | 27dB     |         | 30dB      |           |
| VSWR                                       |            | 1.5:1    |         |           |           |
| Intermodulation IM3                        | 2 x 43dBm  | -150dBc  |         |           |           |
| Maximum Input Power                        |            | 300W     |         | 200W      |           |
| Impedance                                  |            | 50Ω      |         |           |           |
| Beam Isolation                             |            | 15dB     |         |           |           |

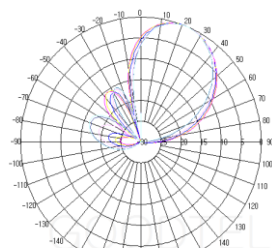
## Mechanical Specifications

|                          |       |                                                                        |
|--------------------------|-------|------------------------------------------------------------------------|
| Dimension                | W/H/D | 520/2500/170mm                                                         |
| Weight (exclude bracket) |       | 24Kg                                                                   |
| Connector Type           |       | 806~960MHz : 4 x 7/16 DIN Female<br>1710~2170MHz : 4 x 7/16 DIN Female |
| Adjustment wheel         | 2EA   | 2EA                                                                    |
| Rated Wind Velocity      |       | 60m/s                                                                  |
| Radome Material          |       | ASA (prevent UV)                                                       |
| Mechanical Down Tilt     |       | 0° ~ 6°                                                                |

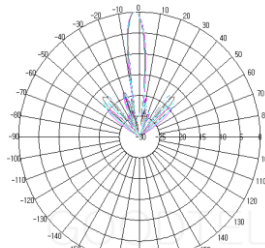
Multi-band



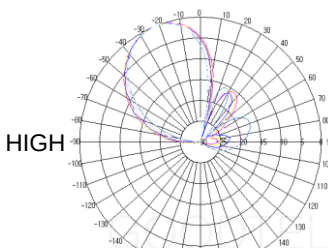
Horizontal - Left



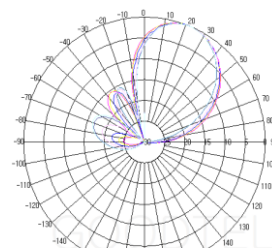
Horizontal - Right



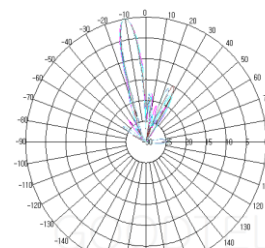
Vertical 2T



Horizontal - Left



Horizontal - Right



Vertical 10T



Install Configuration

## Tri-sector & Bi-directional

| Tri-Sector & Bi-directional |                       |      |             |           |                    |                   |      |
|-----------------------------|-----------------------|------|-------------|-----------|--------------------|-------------------|------|
| Type                        | Frequency Range (MHz) | Port | H-HPBW( ° ) | Gain(dBi) | Electric Tilt( ° ) | Model             | Page |
| X-POL                       | 2300~2400             | 2    | -           | 13.5      | 0~8                | XHE360-13.5V8T    | 131  |
| XX-POL                      | 890~960/1710~2170     | 4    | 80          | 10/11     | -10~+10            | XXGA80-1011V20BC  | 132  |
| 3X-POL                      | 1710~2170             | 6    | 65          | 18        | 0~10               | 3XHA65-18V10T     | 133  |
| 6X-POL                      | 1710~2170             | 12   | 65          | 18        | 0~10               | 6XHA65-18V10T     | 134  |
|                             | 1710~2690             | 12   | 65          | 18        | 0~10               | 6XHT65-18V10T     | 135  |
|                             | 870~960/1710~2170     | 12   | 65          | 16/17     | 0~10               | 6X3G3A65-1617V10T | 136  |
| 9X-POL                      | 1710~2690             | 18   | 65          | 18        | 0~10               | 9XHT65-18V10T     | 137  |
|                             | 806~960/1710~2170     | 18   | 65          | 16/17     | 0~10               | 9X3A6A65-1617V10T | 138  |



Product Specifications Sheet X series for BTS

XHE360-13.5V8T

2300~2400MHz  
Dual Polarization  
Tri-sector Omni directional Antenna, Variable Tilt



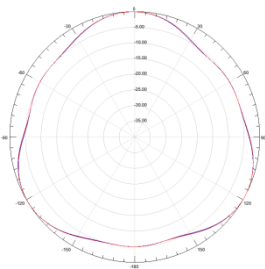
Electrical Specifications

|                                |              |    |
|--------------------------------|--------------|----|
| Frequency Band                 | 2300~2400MHz |    |
| Gain                           | 13.5 dBi     |    |
| Polarization                   | ±45°         |    |
| Half Power Beam width          | Horizontal   | -  |
|                                | Vertical     | 4° |
| Electrical Tilt                | 0°~8°        |    |
| Upper 1st Sidelobe Suppression | 15dB         |    |
| Isolation between Ports        | 25dB         |    |
| VSWR                           | 1.5:1        |    |
| Maximum Input Power            | 200W         |    |
| Impedance                      | 50Ω          |    |
| Cross Polar Ratio              | 18dB         |    |
|                                |              |    |
|                                |              |    |

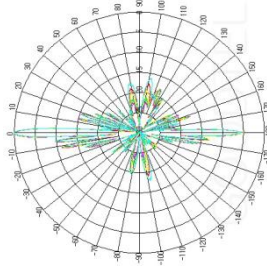
Mechanical Specifications

|                           |                              |             |
|---------------------------|------------------------------|-------------|
| Dimension (without mount) | Ø/H                          | 200/1770 mm |
| Weight (without mount)    |                              | 14Kg        |
| Connector Type            | 2 x 7/16 DIN Female & Bottom |             |
| Rated Wind Velocity       | 60m/s                        |             |
| Radome Material           | ASA +Glass 20%(Prevent UV)   |             |

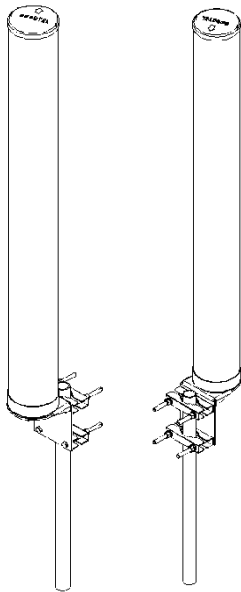
Tri-Sector  
2300~2400MHz



Horizontal



Vertical 0T



Install Configuration

# Product Specifications Sheet XX series for BTS

XXGA80-1011V20BC

890~960/1710~2170MHz

Broad Band Dual Polarization

80° Horizontal Beam Width, Variable Tilt, Azimuth Swing



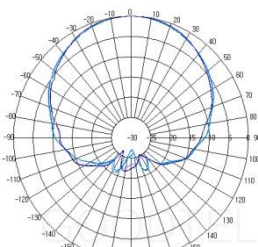
## Electrical Specifications

|                                     |                            |                  |
|-------------------------------------|----------------------------|------------------|
| Frequency Band                      | 890~960MHz                 | 1710~2170MHz     |
| Gain                                | 9.5dBi                     | 10.5dBi          |
| Polarization                        | $\pm 45^\circ$             |                  |
| Half Power Beam width               | Horizontal                 | $80 \pm 8^\circ$ |
|                                     | Vertical                   | $30 \pm 4^\circ$ |
| Electrical Tilt                     | $+10^\circ \sim -10^\circ$ |                  |
| Upper 1st Sidelobe Suppression      | -                          |                  |
| Front-to-Back Ratio                 | 15dB                       | 20dB             |
| Isolation between Ports             | 20dB                       | 25dB             |
| VSWR                                | 1.8:1                      | 1.5:1            |
| Intermodulation IM3                 | 2 x 43dBm                  | -140dBc          |
| Maximum Input Power                 | 150W                       |                  |
| Impedance                           | 50Ω                        |                  |
| Cross Polar Ratio                   | 0°                         | 15dB             |
|                                     | $\pm 60^\circ$             | -                |
| Tilt acceptable error range(squint) | $\pm 2^\circ$              |                  |

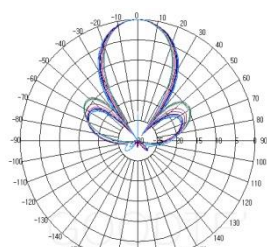
## Mechanical Specifications

|                     |                                                    |            |
|---------------------|----------------------------------------------------|------------|
| Dimension           | W/H/D                                              | Ø200*950mm |
| Weight              | 9Kg                                                |            |
| Connector Type      | 4*7/16 DIN Female & Bottom                         |            |
| Rated Wind Velocity | 60m/s                                              |            |
| Radome Material     | ASA (prevent UV)                                   |            |
| Azimuth Swing Angle | $10^\circ \sim -25^\circ, -10^\circ \sim 25^\circ$ |            |

LOW

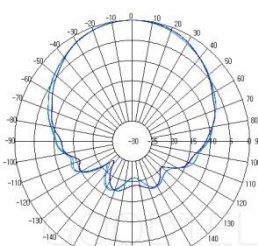


Horizontal

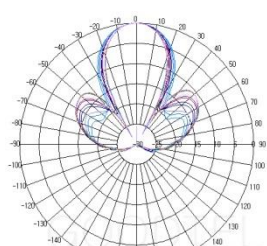


Vertical 0T

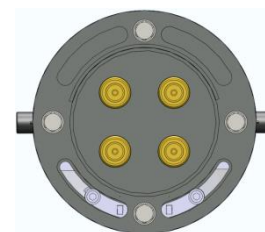
HIGH



Horizontal



Vertical 0T



Install Configuration

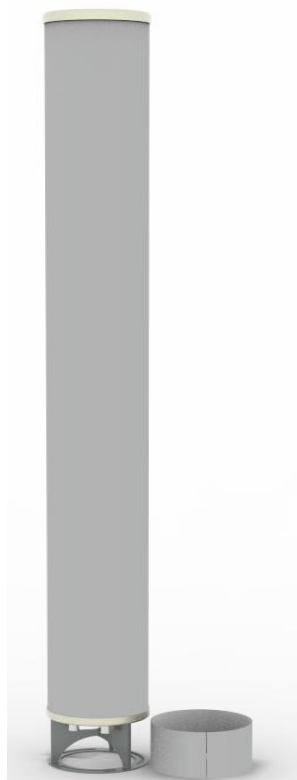
Bi-directional  
Multi-band



# Product Specifications Sheet 3X series for BTS

3XHA65-18V10T

3 x 1710~2170MHz  
Broad Band Dual Polarization Tri-sector  
65° Horizontal Beam Width, Variable Tilt



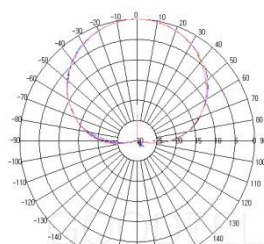
## Electrical Specifications

| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 17.3dBi      | 17.7dBi      | 18dBi        |
| Polarization                   |            | ±45°         |              |              |
| Half Power Beam width          | Horizontal | 66°          | 64°          | 62°          |
|                                | Vertical   | 7°           | 6.5°         | 6°           |
| Electrical Tilt                |            | 0°~ 10°      |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB         |              |              |
| Front-to-Back Ratio            |            | 30dB         |              |              |
| Isolation between Ports        |            | 30dB         |              |              |
| VSWR                           |            | 1.5:1        |              |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            | 300W         |              |              |
| Impedance                      |            | 50Ω          |              |              |
| Cross Polar Ratio              |            | 18dB         |              |              |

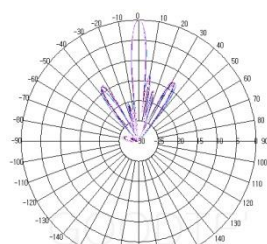
## Mechanical Specifications

|                     |     |                              |
|---------------------|-----|------------------------------|
| Dimension           | Ø/H | 250/1700mm                   |
| Weight              |     | 25Kg                         |
| Connector Type      |     | 6 x 7/16 DIN Female & Bottom |
| Adjustment wheel    |     | 3EA                          |
| Rated Wind Velocity |     | 60m/s                        |
| Radome Material     |     | FRP or ASA (prevent UV)      |

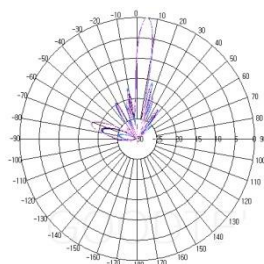
Tri-Sector  
1700~2200MHz



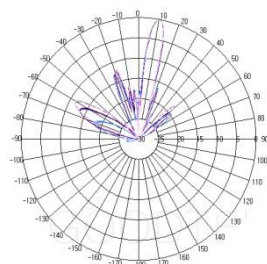
Horizontal



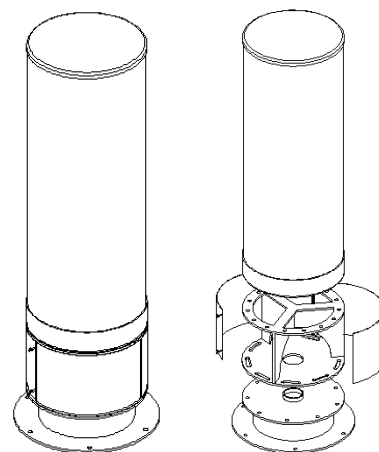
Vertical 0T



Vertical 5T



Vertical 10T

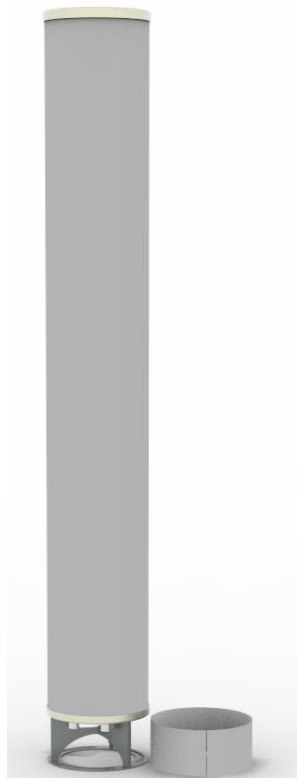


Install Configuration

# Product Specifications Sheet 6X series for BTS

6XHA65-18V10T

6 x 1710~2170MHz  
Broad Band Dual Polarization Tri-sector  
65° Horizontal Beam Width, Variable Tilt



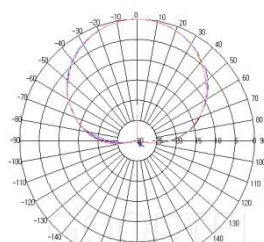
## Electrical Specifications

| Frequency Band                 |            | 1710~1880MHz | 1850~1990MHz | 1920~2170MHz |
|--------------------------------|------------|--------------|--------------|--------------|
| Gain                           |            | 17.1dBi      | 17.7dBi      | 17.7dBi      |
| Polarization                   |            |              | ±45°         |              |
| Half Power Beam width          | Horizontal | 67°          | 64°          | 62°          |
|                                | Vertical   | 7°           | 6.5°         | 6°           |
| Electrical Tilt                |            |              | 0°~ 10°      |              |
| Upper 1st Sidelobe Suppression |            |              | 15dB         |              |
| Front-to-Back Ratio            |            |              | 30dB         |              |
| Isolation between Ports        |            |              | 30dB         |              |
| VSWR                           |            |              | 1.5:1        |              |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc      |              |              |
| Maximum Input Power            |            |              | 300W         |              |
| Impedance                      |            |              | 50Ω          |              |
| Cross Polar Ratio              |            |              | 18dB         |              |

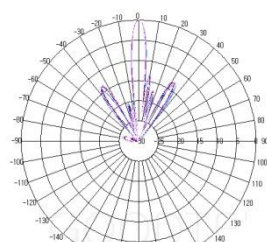
## Mechanical Specifications

|                     |     |                               |
|---------------------|-----|-------------------------------|
| Dimension           | Ø/H | 350/1700mm                    |
| Weight              |     | 30Kg                          |
| Connector Type      |     | 12 x 7/16 DIN Female & Bottom |
| Adjustment wheel    |     | 6EA                           |
| Rated Wind Velocity |     | 60m/s                         |
| Radome Material     |     | FRP or ASA (prevent UV)       |

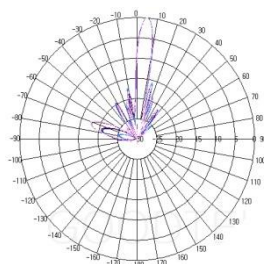
Tri-Sector  
1700~2200MHz



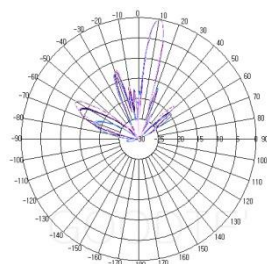
Horizontal



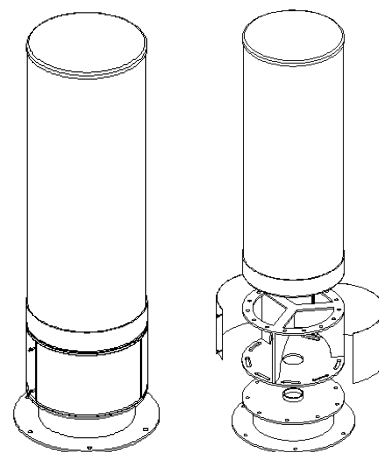
Vertical 0T



Vertical 5T



Vertical 10T

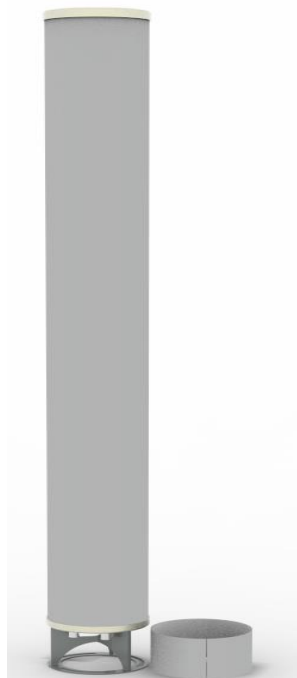


Install Configuration

# Product Specifications Sheet 6X series for BTS

6XHT65-18V10T

12 x 1710~2690MHz  
Multi-band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt



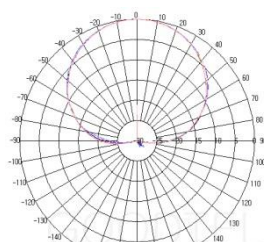
## Electrical Specifications

|                                |            |               |               |               |
|--------------------------------|------------|---------------|---------------|---------------|
| Frequency Band(MHz)            |            | 1710<br>~1880 | 1920<br>~2170 | 2300<br>~2690 |
| Gain                           |            | 17.3dBi       | 17.8dBi       | 17.9dBi       |
| Polarization                   |            | ±45°          |               |               |
| Half Power Beam width          | Horizontal | 68°           | 66°           | 65°           |
|                                | Vertical   | 6.8°          | 6.3°          | 5.3°          |
| Electrical Tilt                |            | 0°~ 10°       |               |               |
| Upper 1st Sidelobe Suppression |            | 15dB          |               |               |
| Front-to-Back Ratio            |            | 25dB          |               |               |
| Isolation between Ports        |            | 30dB          |               |               |
| VSWR                           |            | 1.5:1         |               |               |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc       |               |               |
| Maximum Input Power            |            | 200W          |               |               |
| Impedance                      |            | 50Ω           |               |               |
| Cross Polar Ratio              |            | 18dB          |               |               |

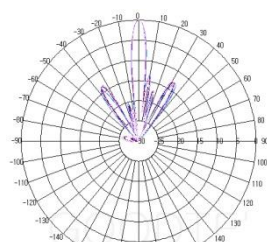
## Mechanical Specifications

|                     |     |                               |
|---------------------|-----|-------------------------------|
| Dimension           | Ø/H | 350/1700mm                    |
| Weight              |     | 40Kg                          |
| Connector Type      |     | 12 x 7/16 DIN Female & Bottom |
| Adjustment wheel    |     | 6EA                           |
| Rated Wind Velocity |     | 60m/s                         |
| Radome Material     |     | FRP or ASA (prevent UV)       |
| Azimuth Swing       |     | -15°~ 15°                     |

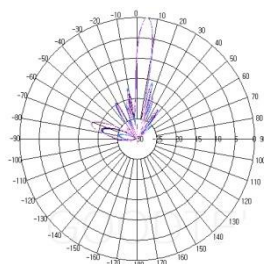
Tri-Sector  
Multi-band



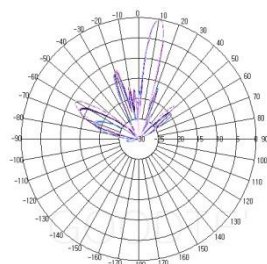
Horizontal



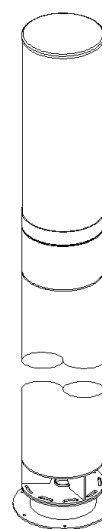
Vertical 0T



Vertical 5T



Vertical 10T

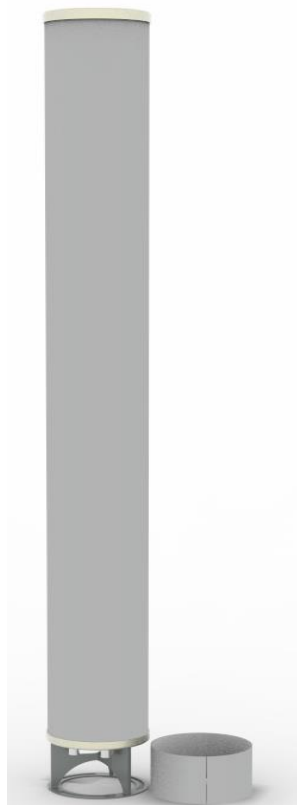


Install Configuration

# Product Specifications Sheet 6X series for BTS

6X3G3A65-1617V10T

3 x 870~960MHz, 3 x 1710~2170MHz  
Multi-band Dual Polarization Tri-sector  
65° Horizontal Beam Width, Variable Tilt

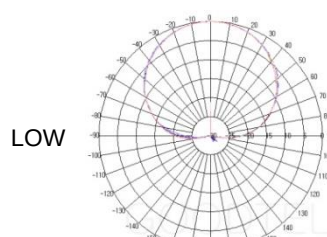


## Electrical Specifications

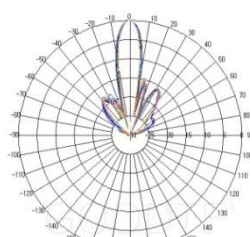
| Frequency Band                 |            | 870~960MHz | 1710~1880MHz | 1920~2170MHz |
|--------------------------------|------------|------------|--------------|--------------|
| Gain                           |            | 16dBi      | 16.3dBi      | 16.8dBi      |
| Polarization                   |            | ±45°/ ±45° |              |              |
| Half Power Beam width          | Horizontal | 65°        | 64°          | 61°          |
|                                | Vertical   | 10°        | 10°          | 9°           |
| Electrical Tilt                |            | 0°~ 10°    |              |              |
| Upper 1st Sidelobe Suppression |            | 15dB       |              |              |
| Front-to-Back Ratio            |            | 30dB       |              |              |
| Isolation between Ports        |            | 1.5:1      |              |              |
| VSWR                           |            | -150dBc    |              |              |
| Intermodulation IM3            | 2 x 43dBm  | 300W       |              |              |
| Maximum Input Power            |            | 50Ω        |              |              |
| Impedance                      |            | 15dB       |              |              |
| Cross Polar Ratio              |            | 18dB       |              |              |

## Mechanical Specifications

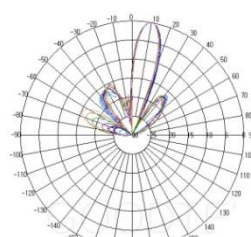
|                     |     |                                                                        |
|---------------------|-----|------------------------------------------------------------------------|
| Dimension           | Ø/H | 350/2300mm                                                             |
| Weight              |     | 35Kg                                                                   |
| Connector Type      |     | 870~960MHz : 6 x 7/16 DIN Female<br>1710~2170MHz : 6 x 7/16 DIN Female |
| Adjustment wheel    |     | 3EA 3EA                                                                |
| Rated Wind Velocity |     | 60m/s                                                                  |
| Radome Material     |     | FRP or ASA (prevent UV)                                                |



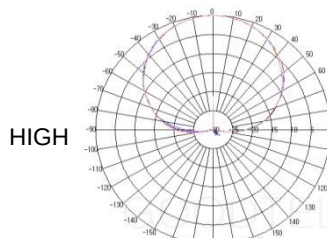
Horizontal



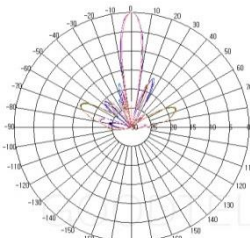
Vertical 0T



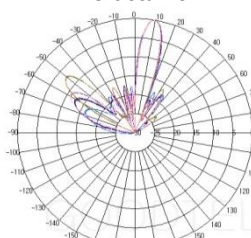
Vertical 10T



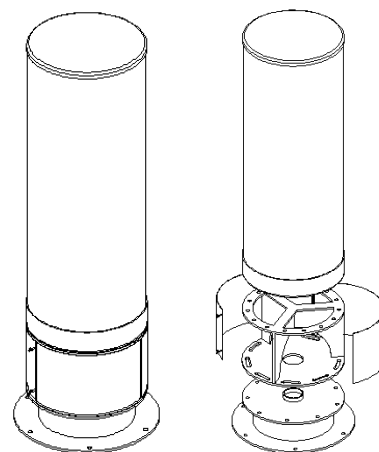
Horizontal



Vertical 0T



Vertical 10T



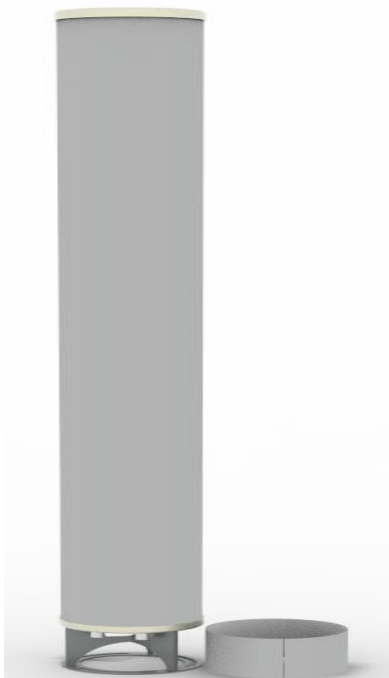
Install Configuration

Tri-Sector  
Multi-band

# Product Specifications Sheet 9X series for BTS

9XHT65-18V10T

9 x 1710~2690MHz  
Multi-band Dual Polarization  
65° Horizontal Beam Width, Variable Tilt



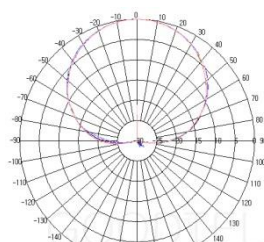
## Electrical Specifications

|                                |            |               |               |               |
|--------------------------------|------------|---------------|---------------|---------------|
| Frequency Band(MHz)            |            | 1710<br>~1880 | 1920<br>~2170 | 2300<br>~2690 |
| Gain                           |            | 17.3dBi       | 17.8dBi       | 17.9dBi       |
| Polarization                   |            | ±45°          |               |               |
| Half Power Beam width          | Horizontal | 68°           | 66°           | 65°           |
|                                | Vertical   | 6.8°          | 6.3°          | 5.3°          |
| Electrical Tilt                |            | 0°~ 10°       |               |               |
| Upper 1st Sidelobe Suppression |            | 15dB          |               |               |
| Front-to-Back Ratio            |            | 25dB          |               |               |
| Isolation between Ports        |            | 30dB          |               |               |
| VSWR                           |            | 1.5:1         |               |               |
| Intermodulation IM3            | 2 x 43dBm  | -150dBc       |               |               |
| Maximum Input Power            |            | 200W          |               |               |
| Impedance                      |            | 50Ω           |               |               |
| Cross Polar Ratio              |            | 18dB          |               |               |

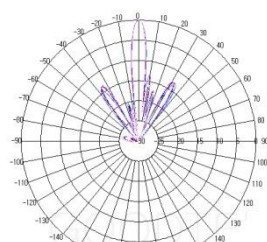
## Mechanical Specifications

|                     |     |                               |
|---------------------|-----|-------------------------------|
| Dimension           | Ø/H | 500/1700mm                    |
| Weight              |     | 65Kg                          |
| Connector Type      |     | 18 x 7/16 DIN Female & Bottom |
| Adjustment wheel    |     | 9EA                           |
| Rated Wind Velocity |     | 60m/s                         |
| Radome Material     |     | FRP or ASA (prevent UV)       |
| Azimuth Swing       |     | -15°~ 15°                     |

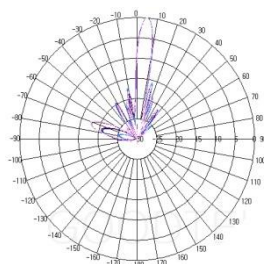
Tri-Sector  
Multi-band



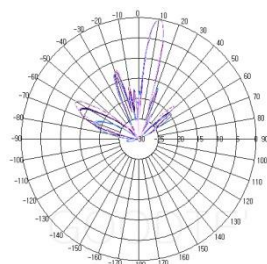
Horizontal



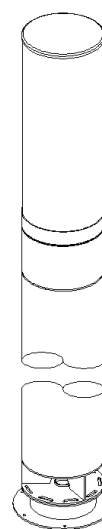
Vertical 0T



Vertical 5T



Vertical 10T



Install Configuration



# Product Specifications Sheet 9X series for BTS

9X3A6A65-1617V10T

3 x 806~960MHz, 6 x 1710~2170MHz  
Multi-band Dual Polarization Tri-sector  
65° Horizontal Beam Width, Variable Tilt

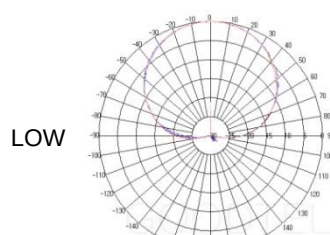
## Electrical Specifications

|                                |                |                               |              |              |
|--------------------------------|----------------|-------------------------------|--------------|--------------|
| Frequency Band                 |                | 806~960MHz                    | 1710~1880MHz | 1920~2170MHz |
| Gain                           |                | 16dBi                         | 16.3dBi      | 16.8dBi      |
| Polarization                   |                | $\pm 45^\circ / \pm 45^\circ$ |              |              |
| Half Power Beam width          | Horizontal     | 65°                           | 64°          | 61°          |
|                                | Vertical       | 10°                           | 10°          | 9°           |
| Electrical Tilt                |                | 0° ~ 10°                      |              |              |
| Upper 1st Sidelobe Suppression |                | 15dB                          |              |              |
| Front-to-Back Ratio            |                | 25dB                          |              |              |
| Isolation between Ports        |                | 30dB                          |              |              |
| VSWR                           |                | 1.5:1                         |              |              |
| Intermodulation IM3            | 2 x 43dBm      | -150dBc                       |              |              |
| Maximum Input Power            |                | 300W                          |              |              |
| Impedance                      |                | 50Ω                           |              |              |
| Cross Polar Ratio              | 0°             | 20dB                          |              |              |
|                                | $\pm 60^\circ$ | 10dB                          | 10dB         | 8dB          |

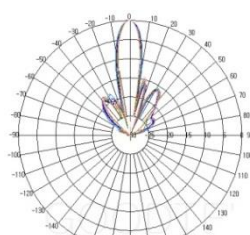
## Mechanical Specifications

|                      |     |                                                                         |
|----------------------|-----|-------------------------------------------------------------------------|
| Dimension            | Ø/H | 350/2300mm                                                              |
| Weight               |     | 55Kg                                                                    |
| Connector Type       |     | 806~960MHz : 6 x 7/16 DIN Female<br>1710~2170MHz : 12 x 7/16 DIN Female |
| Adjustment wheel     |     | 3EA 6EA                                                                 |
| Rated Wind Velocity  |     | 60m/s                                                                   |
| Radome Material      |     | ASA (prevent UV)                                                        |
| Mechanical Down Tilt |     | 0° ~ 10°                                                                |

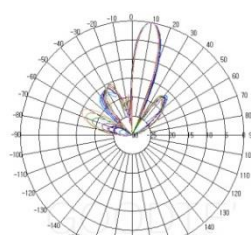
Tri-Sector  
Multi-band



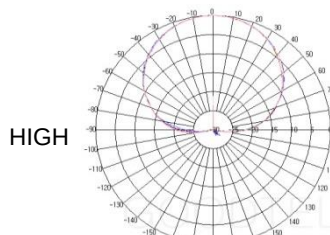
Horizontal



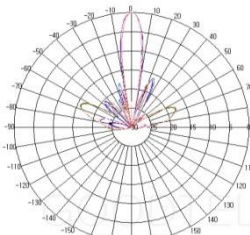
Vertical 0T



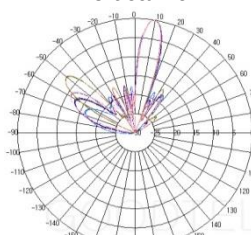
Vertical 10T



Horizontal



Vertical 0T



Vertical 10T



Install Configuration

